

# Deeper into Math



Teachers on Wheels Inc

Thomas V. C. Dawe

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# Table of Contents

<b>Deeper into Math Pretest</b> .....	<b>1</b>
<b>Multiplication</b> .....	<b>3</b>
<b>Division</b> .....	<b>36</b>
<b>Fractions</b> .....	<b>62</b>
<b>Decimals</b> .....	<b>105</b>
<b>Percent</b> .....	<b>130</b>
<b>Addendum I</b>	
<b>Multiplication Table</b> .....	<b>134</b>
<b>Answer Key</b> .....	<b>135</b>



# Deeper into Math Pretest

If you are having trouble with the pretest, you may need to practice addition and subtraction. Please refer to *Living Math*, a Teachers on Wheels publication.

**Add the numbers.**

$$\begin{array}{r} 355 \\ + 623 \\ \hline \end{array}$$

$$\begin{array}{r} 881 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 515 \\ + 411 \\ \hline \end{array}$$

$$\begin{array}{r} 271 \\ + 308 \\ \hline \end{array}$$

$$\begin{array}{r} 588 \\ + 313 \\ \hline \end{array}$$

$$\begin{array}{r} 658 \\ + 201 \\ \hline \end{array}$$

$$\begin{array}{r} 869 \\ + 130 \\ \hline \end{array}$$

$$\begin{array}{r} 358 \\ + 611 \\ \hline \end{array}$$

$$\begin{array}{r} 951 \\ + 28 \\ \hline \end{array}$$

$$\begin{array}{r} 617 \\ + 342 \\ \hline \end{array}$$

$$\begin{array}{r} 501 \\ + 98 \\ \hline \end{array}$$

$$\begin{array}{r} 531 \\ + 218 \\ \hline \end{array}$$

**Subtract the numbers.**

$$\begin{array}{r} 725 \\ - 481 \\ \hline \end{array}$$

$$\begin{array}{r} 658 \\ - 471 \\ \hline \end{array}$$

$$\begin{array}{r} 648 \\ - 542 \\ \hline \end{array}$$

$$\begin{array}{r} 948 \\ - 715 \\ \hline \end{array}$$

$$\begin{array}{r} 634 \\ - 63 \\ \hline \end{array}$$

$$\begin{array}{r} 558 \\ - 253 \\ \hline \end{array}$$

$$\begin{array}{r} 726 \\ - 66 \\ \hline \end{array}$$

$$\begin{array}{r} 834 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 617 \\ - 542 \\ \hline \end{array}$$

$$\begin{array}{r} 453 \\ - 374 \\ \hline \end{array}$$

$$\begin{array}{r} 768 \\ - 364 \\ \hline \end{array}$$

$$\begin{array}{r} 732 \\ - 378 \\ \hline \end{array}$$

$$\begin{array}{r} 843 \\ - 586 \\ \hline \end{array}$$

$$\begin{array}{r} 947 \\ - 871 \\ \hline \end{array}$$

$$\begin{array}{r} 433 \\ - 278 \\ \hline \end{array}$$

$$\begin{array}{r} 556 \\ - 374 \\ \hline \end{array}$$

See answers page 135

# Multiplication

**In math, the “x” is used to signal multiplication. The final answer to a multiplication problem is called the *product*.**

Examples:

For  $2 \times 2$  ,

One would say “two times two”.

This means  $2 + 2$ .

The product is 4.

For  $3 \times 5$  ,

One would say “three times five”.

This means  $5 + 5 + 5$ .

The product is 15.

For  $4 \times 6$  ,

One would say “four times six”.

This means  $6 + 6 + 6 + 6$ .

The product is 24.



# Using a Multiplication Table

See Addendum I for multiplication table (Page 134)

**Example:**  $7 \times 5$

**Step 1**

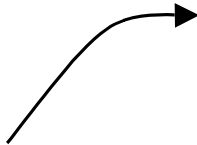
Find the 7<sup>th</sup> row.



X	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

**Step 2**

Find the 5<sup>th</sup> column.



**Step 3**

Find the product where the row and the column cross.

**The product is 35**

# Remember



The product for any number multiplied by zero is always zero.

$$2 \times 0 = 0$$

$$0 \times 4 = 0$$

$$8 \times 0 = 0$$

**Multiply the numbers.**

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 0 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \underline{\times 4} \end{array}$$

$$\begin{array}{r} 3 \\ \underline{\times 3} \end{array}$$

$$\begin{array}{r} 0 \\ \underline{\times 4} \end{array}$$

$$\begin{array}{r} 9 \\ \underline{\times 8} \end{array}$$

$$\begin{array}{r} 6 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 9 \\ \underline{\times 7} \end{array}$$

$$\begin{array}{r} 3 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 7 \\ \underline{\times 0} \end{array}$$

$$\begin{array}{r} 4 \\ \underline{\times 8} \end{array}$$

$$\begin{array}{r} 6 \\ \underline{\times 8} \end{array}$$

$$\begin{array}{r} 9 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 6 \\ \underline{\times 4} \end{array}$$

$$\begin{array}{r} 1 \\ \underline{\times 5} \end{array}$$

$$\begin{array}{r} 7 \\ \underline{\times 6} \end{array}$$

$$\begin{array}{r} 4 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 1 \\ \underline{\times 8} \end{array}$$

$$\begin{array}{r} 7 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 8 \\ \underline{\times 2} \end{array}$$

$$\begin{array}{r} 2 \\ \underline{\times 0} \end{array}$$

$$\begin{array}{r} 4 \\ \underline{\times 1} \end{array}$$

$$\begin{array}{r} 1 \\ \underline{\times 7} \end{array}$$

$$\begin{array}{r} 2 \\ \underline{\times 3} \end{array}$$

$$\begin{array}{r} 6 \\ \underline{\times 7} \end{array}$$

$$\begin{array}{r} 4 \\ \underline{\times 5} \end{array}$$

$$\begin{array}{r} 7 \\ \underline{\times 5} \end{array}$$

$$\begin{array}{r} 1 \\ \underline{\times 6} \end{array}$$

$$\begin{array}{r} 2 \\ \underline{\times 9} \end{array}$$

$$\begin{array}{r} 2 \\ \underline{\times 8} \end{array}$$

$$\begin{array}{r} 5 \\ \underline{\times 1} \end{array}$$

$$\begin{array}{r} 3 \\ \underline{\times 9} \end{array}$$

# Real Life Math

Diane works as a fruit farmer. She sends large sacks of apples to the local market by truck. There are 2 shipments per week. How many shipments would Diane send in 4 weeks?

At the market, apples are put in baskets for display. There are 6 apples in each basket. How many apples would be needed to fill 9 baskets?



# Multiplying in the Tens

To multiply numbers in the tens:

Example 
$$\begin{array}{r} 43 \\ \times 2 \\ \hline \end{array}$$

## Step 1

Multiply the ones.

$$3 \times 2 = 6$$

## Step 2

Fill in the ones place.

$$\begin{array}{r} 43 \\ \times 2 \\ \hline 6 \end{array}$$

## Step 3

Multiply the tens by the bottom number.

$$4 \times 2 = 8$$

## Step 4

Fill in the tens place.

$$\begin{array}{r} 43 \\ \times 2 \\ \hline 86 \end{array}$$

The final answer is 86.

**Multiply the numbers.**

$$\begin{array}{r} 62 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 71 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 97 \\ \times 0 \\ \hline \end{array}$$

# Multiplying and Carrying in the Tens

Example 
$$\begin{array}{r} 27 \\ \times 3 \\ \hline \end{array}$$

## Step 1

Multiply the ones.

$$7 \times 3 = 21$$

## Step 2

Fill in the ones place.

$$\begin{array}{r} 27 \\ \times 3 \\ \hline 1 \end{array}$$

## Step 3

Carry the tens.

$$\begin{array}{r} 2 \\ 27 \\ \times 3 \\ \hline 1 \end{array}$$

## Step 4

Multiply the tens by the bottom number.

$$2 \times 3 = 6$$

## Step 5

Add up the tens.

$$2 + 6 = 8$$

## Step 6

Fill in the tens place.

$$\begin{array}{r} 27 \\ \times 3 \\ \hline 81 \end{array}$$

The final answer is 81.

**Multiply the numbers.**

$$\begin{array}{r} 46 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ \times 0 \\ \hline \end{array}$$

# Real life Math

Mark sells radios. He often sells 25 radios per week. How many radios would Mark expect to sell in 3 weeks?

Each radio sells for \$39. What would be the cost for 2 radios?



# Multiplication Example

Example  $76$   
 $\times 5$

**Step 1**

Multiply the ones.

$6 \times 5 = 30$

**Step 2**

Fill in the ones place.

$$\begin{array}{r} 76 \\ \times 5 \\ \hline 0 \end{array}$$

**Step 3**

Carry the tens

$$\begin{array}{r} 3 \\ 76 \\ \times 5 \\ \hline 0 \end{array}$$

**Step 4**

Multiply the tens by the bottom number.

$7 \times 5 = 35$

**Step 5**

Add up the tens

$3 + 35 = 38$

**Step 6**

Fill in the tens (and hundreds)

$$\begin{array}{r} 27 \\ \times 3 \\ \hline 380 \end{array}$$

**The final answer is 380.**

**Multiply the numbers.**

$$\begin{array}{r} 96 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 74 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 7 \\ \hline \end{array}$$

# Real Life Math

Jim is a carpenter. He goes to the hardware store to buy some boxes of nails. Each box contains 52 nails. Jim buys 4 boxes. How many nails does he have?

Jim often uses 9 boxes of nails per week. How many nails should he expect to use in a week?



# Multiplying in the Hundreds

**Example** 
$$\begin{array}{r} 678 \\ \times 7 \\ \hline \end{array}$$

## Step 1

Multiply the ones.

$$8 \times 7 = 56$$

## Step 2

Fill in the ones place.

$$\begin{array}{r} 678 \\ \times 7 \\ \hline 6 \end{array}$$

## Step 3

Carry the tens.

$$\begin{array}{r} 5 \\ 678 \\ \times 7 \\ \hline 6 \end{array}$$

## Step 4

Multiply the tens by the bottom number.

$$7 \times 7 = 49$$

## Step 5

Add up the tens.

$$5 + 49 = 54$$

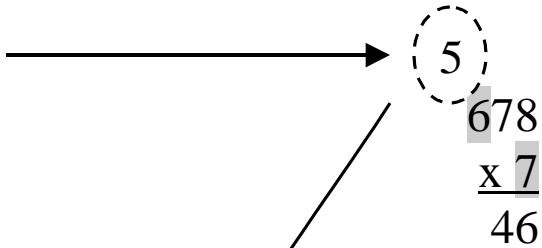
## Step 6

Fill in the tens place.

$$\begin{array}{r} 678 \\ \times 7 \\ \hline 46 \end{array}$$

**Step 7**

Carry the hundreds.



**Step 8**

Multiply the hundreds by the bottom number.

$$6 \times 7 = 42$$

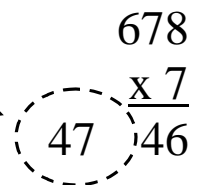
**Step 9**

Add up the hundreds.

$$5 + 42 = 47$$

**Step 10**

Fill in the hundreds place.



**The final answer is 4746.**

**Multiply the numbers.**

$$\begin{array}{r} 303 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 577 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 576 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 175 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 474 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 870 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 168 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 464 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 648 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 485 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 183 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 405 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 104 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 463 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 965 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 617 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 523 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 572 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 427 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 458 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 976 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 308 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 905 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 712 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 338 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 188 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 822 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 361 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 272 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 255 \\ \times 2 \\ \hline \end{array}$$

278	210	926	724	154
<u>x 2</u>	<u>x 6</u>	<u>x 1</u>	<u>x 7</u>	<u>x 5</u>

738	767	920	439	593
<u>x 4</u>	<u>x 6</u>	<u>x 0</u>	<u>x 5</u>	<u>x 6</u>

315	796	693	511	749
<u>x 1</u>	<u>x 3</u>	<u>x 8</u>	<u>x 9</u>	<u>x 2</u>

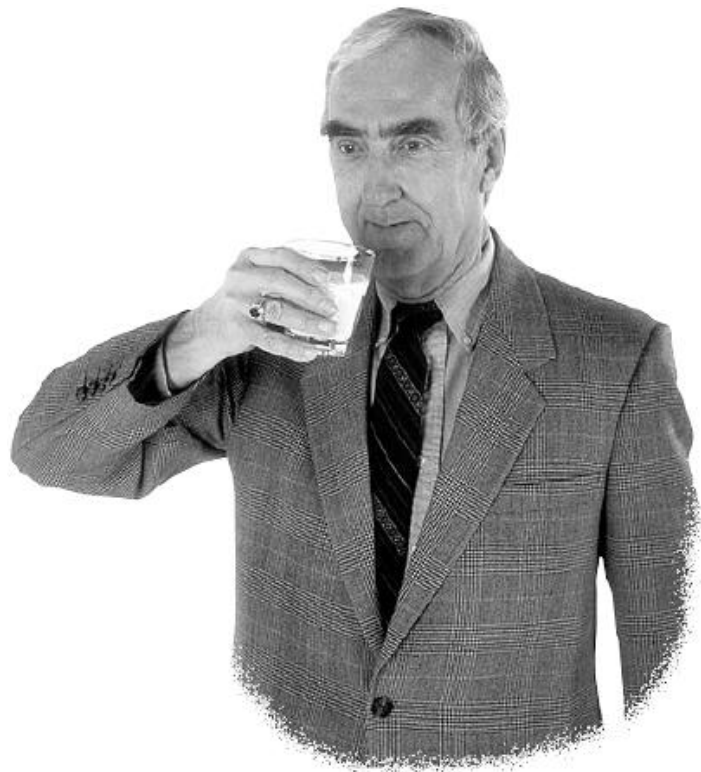
278	662	864	771	434
<u>x 4</u>	<u>x 5</u>	<u>x 7</u>	<u>x 3</u>	<u>x 1</u>

272	700	765	512	808
<u>x 6</u>	<u>x 4</u>	<u>x 6</u>	<u>x 2</u>	<u>x 9</u>

655	251	950	573	485
<u>x 4</u>	<u>x 4</u>	<u>x 7</u>	<u>x 8</u>	<u>x 8</u>

# Real Life Math

Paul is a teacher. He helps out with the school canteen. The school has 826 students. Each student will often consume 5 cartons of milk per week. How many cartons of milk should Paul order for one week?



# Multiplication

**Example**

$$\begin{array}{r} 21 \\ \times 42 \\ \hline \end{array}$$

## Step 1

Multiply the top number by the ones (21 x 2).

$$\begin{array}{r} 21 \\ \times 42 \\ \hline 42 \end{array}$$

## Step 2

Place a zero in the ones place, below the product of **Step 1**.

## Step 3

Multiply the top number by the tens (21 x 4) and place it next to the zero from **Step 2**.

$$\begin{array}{r} 21 \\ \times 42 \\ \hline 42 \\ 840 \end{array}$$

## Step 4

Add the bottom two numbers (42 + 840).

$$\begin{array}{r} 21 \\ \times 42 \\ \hline 42 \\ 840 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 21 \\ \times 42 \\ \hline 42 \\ 840 \\ \hline 882 \end{array}$$

**The final answer is 882.**

**Multiply the numbers.**

$$\begin{array}{r} 34 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \times 44 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 55 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 82 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 83 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \times 43 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 70 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 41 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 39 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 19 \\ \hline \end{array}$$

$$\begin{array}{r} 41 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ \times 32 \\ \hline \end{array}$$

# Real Life Math

Frank is an egg farmer. Eggs are sold in cartons that contain 12 eggs. Frank sends eggs to market in larger boxes. Each box contains 12 cartons. What is the total number of eggs in each box?



# Multiplication

**Example**

$$\begin{array}{r} 56 \\ \times 76 \\ \hline \end{array}$$

Multiply 56 by 6 ones.

$$\begin{array}{r} 56 \\ \times 76 \\ \hline 336 \end{array}$$

Multiply 56 by 7 tens.

$$\begin{array}{r} 56 \\ \times 76 \\ \hline 336 \\ 3920 \end{array}$$

$$\begin{array}{r} 56 \\ \times 76 \\ \hline 336 \\ 3920 \\ \hline 4256 \end{array} \quad \begin{array}{l} > \\ > \end{array} \quad \begin{array}{l} \text{Add} \\ \text{Add} \end{array}$$

**The final answer is 4256.**

**Multiply the numbers.**

$$\begin{array}{r} 91 \\ \times 97 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 51 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ \times 50 \\ \hline \end{array}$$

$$\begin{array}{r} 87 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 55 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 87 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ \times 57 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ \times 41 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ \times 24 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times 65 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ \times 67 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ \times 92 \\ \hline \end{array}$$

$$\begin{array}{r} 61 \\ \times 88 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 47 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ \times 72 \\ \hline \end{array}$$

$$\begin{array}{r} 55 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 69 \\ \times 83 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ \times 92 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ \times 96 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ \times 83 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 62 \\ \times 66 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times 38 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 66 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 47 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ \times 78 \\ \hline \end{array}$$

$$\begin{array}{r} 85 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ \times 99 \\ \hline \end{array}$$

$$\begin{array}{r} 80 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ \times 67 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ \times 96 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \times 95 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ \times 48 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 83 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ \times 65 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} 79 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ \times 51 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times 26 \\ \hline \end{array}$$

$$\begin{array}{r} 26 \\ \times 65 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ \times 89 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \times 81 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 61 \\ \times 57 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ \times 40 \\ \hline \end{array}$$

# Real Life Math

Jean works in an office. She is able to type 53 words per minute. How many words will she type in 15 minutes?



# Multiplication

**Example**

$$\begin{array}{r} 671 \\ \times 57 \\ \hline \end{array}$$

Multiply 671 by 7 ones.

$$\begin{array}{r} 671 \\ \times 57 \\ \hline 4697 \end{array}$$

Multiply 671 by 5 tens.

$$\begin{array}{r} 671 \\ \times 57 \\ \hline 4697 \\ 33550 \end{array}$$

← Note inserted zero

$$\begin{array}{r} 671 \\ \times 57 \\ \hline 4697 \\ 33550 \\ \hline 38247 \end{array} \quad \rangle \text{ Add}$$

**The final answer is 38247.**

**Multiply the numbers.**

$$\begin{array}{r} 102 \\ \times 53 \\ \hline \end{array}$$

$$\begin{array}{r} 155 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 572 \\ \times 89 \\ \hline \end{array}$$

$$\begin{array}{r} 889 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 384 \\ \times 79 \\ \hline \end{array}$$

$$\begin{array}{r} 280 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 194 \\ \times 95 \\ \hline \end{array}$$

$$\begin{array}{r} 811 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 308 \\ \times 72 \\ \hline \end{array}$$

$$\begin{array}{r} 219 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 544 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 725 \\ \times 28 \\ \hline \end{array}$$

$$\begin{array}{r} 774 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 363 \\ \times 66 \\ \hline \end{array}$$

$$\begin{array}{r} 941 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 249 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 533 \\ \times 27 \\ \hline \end{array}$$

$$\begin{array}{r} 294 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 495 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 446 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 750 \\ \times 70 \\ \hline \end{array}$$

$$\begin{array}{r} 909 \\ \times 25 \\ \hline \end{array}$$

$$\begin{array}{r} 249 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 339 \\ \times 25 \\ \hline \end{array}$$

$$\begin{array}{r} 676 \\ \times 77 \\ \hline \end{array}$$

$$\begin{array}{r} 485 \\ \times 75 \\ \hline \end{array}$$

$$\begin{array}{r} 296 \\ \times 85 \\ \hline \end{array}$$

$$\begin{array}{r} 233 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 312 \\ \times 40 \\ \hline \end{array}$$

$$\begin{array}{r} 589 \\ \times 78 \\ \hline \end{array}$$

$$\begin{array}{r} 809 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 874 \\ \times 19 \\ \hline \end{array}$$

$$\begin{array}{r} 694 \\ \times 97 \\ \hline \end{array}$$

$$\begin{array}{r} 987 \\ \times 71 \\ \hline \end{array}$$

$$\begin{array}{r} 137 \\ \times 61 \\ \hline \end{array}$$

$$\begin{array}{r} 287 \\ \times 43 \\ \hline \end{array}$$

$$\begin{array}{r} 776 \\ \times 98 \\ \hline \end{array}$$

$$\begin{array}{r} 206 \\ \times 33 \\ \hline \end{array}$$

$$\begin{array}{r} 243 \\ \times 90 \\ \hline \end{array}$$

$$\begin{array}{r} 337 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 848 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 639 \\ \times 88 \\ \hline \end{array}$$

$$\begin{array}{r} 591 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 938 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 636 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 710 \\ \times 45 \\ \hline \end{array}$$

$$\begin{array}{r} 386 \\ \times 64 \\ \hline \end{array}$$

$$\begin{array}{r} 723 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 828 \\ \times 18 \\ \hline \end{array}$$

$$\begin{array}{r} 250 \\ \times 24 \\ \hline \end{array}$$

$$\begin{array}{r} 914 \\ \times 51 \\ \hline \end{array}$$

$$\begin{array}{r} 768 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 600 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 291 \\ \times 96 \\ \hline \end{array}$$

$$\begin{array}{r} 448 \\ \times 28 \\ \hline \end{array}$$

$$\begin{array}{r} 848 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 417 \\ \times 84 \\ \hline \end{array}$$

$$\begin{array}{r} 580 \\ \times 51 \\ \hline \end{array}$$

$$\begin{array}{r} 536 \\ \times 61 \\ \hline \end{array}$$

$$\begin{array}{r} 948 \\ \times 32 \\ \hline \end{array}$$

# Real Life Math

Carla sells magazines. She expects to sell 255 magazines per day. How many magazines should Carla plan to sell in 25 days?



# Multiplication

**Example**

$$\begin{array}{r} 897 \\ \times 284 \\ \hline \end{array}$$

Multiply 897 by 4 ones.

$$\begin{array}{r} 897 \\ \times 284 \\ \hline 3588 \end{array}$$

Multiply 897 by 8 tens.

$$\begin{array}{r} 897 \\ \times 284 \\ \hline 3588 \\ 71760 \end{array}$$

Multiply 897 by 2 hundreds.

$$\begin{array}{r} 897 \\ \times 284 \\ \hline 3588 \\ 71760 \\ 179400 \end{array}$$

Note two zeros inserted.

$$\begin{array}{r} 897 \\ \times 284 \\ \hline 3588 \\ 71760 \\ 179400 \\ \hline 254748 \end{array}$$

Add

**The final answer is 254748.**

**Multiply the numbers.**

$$\begin{array}{r} 490 \\ \times 171 \\ \hline \end{array}$$

$$\begin{array}{r} 131 \\ \times 39 \\ \hline \end{array}$$

$$\begin{array}{r} 117 \\ \times 634 \\ \hline \end{array}$$

$$\begin{array}{r} 435 \\ \times 997 \\ \hline \end{array}$$

$$\begin{array}{r} 166 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ \times 862 \\ \hline \end{array}$$

$$\begin{array}{r} 884 \\ \times 589 \\ \hline \end{array}$$

$$\begin{array}{r} 108 \\ \times 512 \\ \hline \end{array}$$

$$\begin{array}{r} 645 \\ \times 788 \\ \hline \end{array}$$

$$\begin{array}{r} 143 \\ \times 135 \\ \hline \end{array}$$

$$\begin{array}{r} 403 \\ \times 308 \\ \hline \end{array}$$

$$\begin{array}{r} 298 \\ \times 488 \\ \hline \end{array}$$

$$\begin{array}{r} 308 \\ \times 965 \\ \hline \end{array}$$

$$\begin{array}{r} 934 \\ \times 271 \\ \hline \end{array}$$

$$\begin{array}{r} 762 \\ \times 889 \\ \hline \end{array}$$

$$\begin{array}{r} 227 \\ \times 301 \\ \hline \end{array}$$

$$\begin{array}{r} 281 \\ \times 86 \\ \hline \end{array}$$

$$\begin{array}{r} 893 \\ \times 555 \\ \hline \end{array}$$

$$\begin{array}{r} 646 \\ \times 588 \\ \hline \end{array}$$

$$\begin{array}{r} 598 \\ \times 401 \\ \hline \end{array}$$

$$\begin{array}{r} 673 \\ \times 441 \\ \hline \end{array}$$

$$\begin{array}{r} 717 \\ \times 94 \\ \hline \end{array}$$

$$\begin{array}{r} 743 \\ \times 104 \\ \hline \end{array}$$

$$\begin{array}{r} 574 \\ \times 170 \\ \hline \end{array}$$

$$\begin{array}{r} 671 \\ \times 713 \\ \hline \end{array}$$

$$\begin{array}{r} 573 \\ \times 604 \\ \hline \end{array}$$

$$\begin{array}{r} 809 \\ \times 517 \\ \hline \end{array}$$

$$\begin{array}{r} 909 \\ \times 281 \\ \hline \end{array}$$

$$\begin{array}{r} 250 \\ \times 919 \\ \hline \end{array}$$

$$\begin{array}{r} 376 \\ \times 86 \\ \hline \end{array}$$

$$\begin{array}{r} 544 \\ \times 690 \\ \hline \end{array}$$

$$\begin{array}{r} 844 \\ \times 686 \\ \hline \end{array}$$

$$\begin{array}{r} 205 \\ \times 578 \\ \hline \end{array}$$

$$\begin{array}{r} 584 \\ \times 68 \\ \hline \end{array}$$

$$\begin{array}{r} 270 \\ \times 386 \\ \hline \end{array}$$

$$\begin{array}{r} 637 \\ \times 52 \\ \hline \end{array}$$

$$\begin{array}{r} 408 \\ \times 533 \\ \hline \end{array}$$

$$\begin{array}{r} 460 \\ \times 84 \\ \hline \end{array}$$

$$\begin{array}{r} 858 \\ \times 287 \\ \hline \end{array}$$

$$\begin{array}{r} 466 \\ \times 47 \\ \hline \end{array}$$

$$\begin{array}{r} 241 \\ \times 506 \\ \hline \end{array}$$

$$\begin{array}{r} 888 \\ \times 825 \\ \hline \end{array}$$

$$\begin{array}{r} 924 \\ \times 532 \\ \hline \end{array}$$

$$\begin{array}{r} 653 \\ \times 477 \\ \hline \end{array}$$

$$\begin{array}{r} 788 \\ \times 644 \\ \hline \end{array}$$

$$\begin{array}{r} 572 \\ \times 356 \\ \hline \end{array}$$

$$\begin{array}{r} 835 \\ \times 682 \\ \hline \end{array}$$

$$\begin{array}{r} 579 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 531 \\ \times 269 \\ \hline \end{array}$$

$$\begin{array}{r} 306 \\ \times 429 \\ \hline \end{array}$$

$$\begin{array}{r} 844 \\ \times 218 \\ \hline \end{array}$$

$$\begin{array}{r} 655 \\ \times 499 \\ \hline \end{array}$$

$$\begin{array}{r} 138 \\ \times 761 \\ \hline \end{array}$$

$$\begin{array}{r} 397 \\ \times 930 \\ \hline \end{array}$$

$$\begin{array}{r} 152 \\ \times 603 \\ \hline \end{array}$$

$$\begin{array}{r} 541 \\ \times 714 \\ \hline \end{array}$$

$$\begin{array}{r} 905 \\ \times 776 \\ \hline \end{array}$$

$$\begin{array}{r} 989 \\ \times 533 \\ \hline \end{array}$$

$$\begin{array}{r} 624 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 605 \\ \times 904 \\ \hline \end{array}$$

# Real Life Math

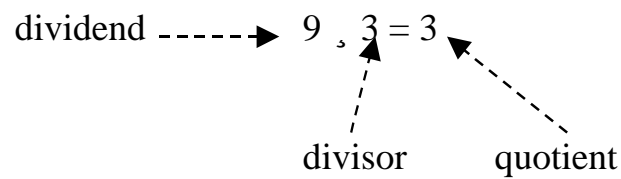
Kelly runs a clothing factory. 875 shirts are produced in a day. There are 295 production days per year. How many shirts should she expect to produce in a year?



# Division

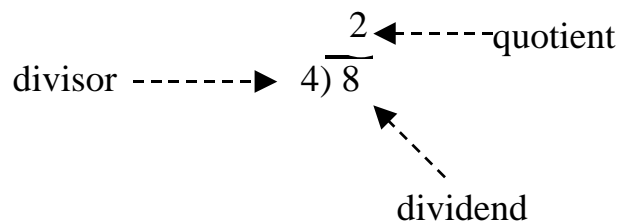
In math, the symbols  $\div$  and  $\overline{\hspace{1cm}}$  are used to denote division.

$9 \div 3$  is read as “9 divided by 3”.



The answer (quotient) is 3.

$4 \overline{)8}$  is read as “8 divided by 4”.



The answer (quotient) is 2.

## Divide

$7 \div 1$

$9 \div 3$

$6 \div 2$

$2 \div 1$

$4 \div 2$

$6 \div 3$

$8 \div 4$

$8 \div 2$

$$\begin{array}{r} \overline{4) 8} \end{array}$$

$$\begin{array}{r} \overline{3) 6} \end{array}$$

$$\begin{array}{r} \overline{2) 8} \end{array}$$

$$\begin{array}{r} \overline{2) 4} \end{array}$$

$$\begin{array}{r} \overline{1) 2} \end{array}$$

$$\begin{array}{r} \overline{2) 6} \end{array}$$

$$\begin{array}{r} \overline{1) 7} \end{array}$$

$$\begin{array}{r} \overline{3) 9} \end{array}$$



# Real Life Math

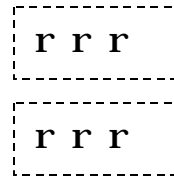
Jerry is a server at a coffee house. This morning, he is serving 8 customers. There are 2 people at each table. How many tables is he waiting on?



# Division

Examples:

$$6 \div 2 = 3$$

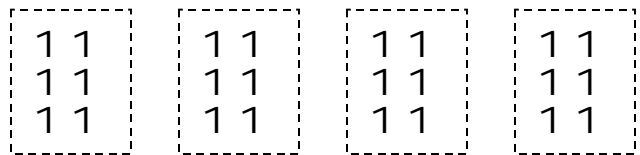


There are a total of 6 r 's.

The r 's are divided into 2 groups.

There are 3 r 's in each group.

$$\begin{array}{r} 6 \\ 4 \overline{)24} \end{array}$$



There are a total of 24 1 's.

The 1 's are divided into 4 groups.

There are 6 1 's in each group.

## Divide

$56 \div 7$

$28 \div 4$

$21 \div 3$

$35 \div 5$

$27 \div 9$

$45 \div 5$

$30 \div 6$

$45 \div 9$

$4 \overline{) 12}$

$9 \overline{) 54}$

$6 \overline{) 18}$

$8 \overline{) 40}$

$5 \overline{) 15}$

$8 \overline{) 56}$

$9 \overline{) 18}$

$5 \overline{) 10}$

$5 \overline{) 30}$

$3 \overline{) 6}$

$2 \overline{) 4}$

$7 \overline{) 42}$

$6) \overline{48}$

$0) \overline{79}$

$7) \overline{28}$

$6) \overline{42}$

$5) \overline{25}$

$3) \overline{27}$

$4) \overline{16}$

$7) \overline{21}$

$6) \overline{36}$

$5) \overline{40}$

$7) \overline{49}$

$3) \overline{18}$

$8) \overline{64}$

$3) \overline{15}$

$9) \overline{81}$

$9) \overline{36}$

$3) \overline{15}$

$6) \overline{54}$

$3) \overline{12}$

$2) \overline{10}$

$8) \overline{32}$

$2) \overline{6}$

$2) \overline{14}$

$0) \overline{42}$

## Remember



Division always related to multiplication.

For example,

$$\text{If } 6 \times 9 = 54,$$

$$\text{then } 54 \div 6 = 9,$$

$$\text{or } 54 \div 9 = 6.$$

$$\text{If } 4 \times 8 = 32,$$

$$\text{then } 32 \div 4 = 8$$

# Real Life Math

Leo needs to buy 16 rolls of paper towels. There are 4 rolls of paper in a pack. How many packages of paper towels does he need to buy?

How many packages of paper towels would Leo need to buy to get 24 rolls?

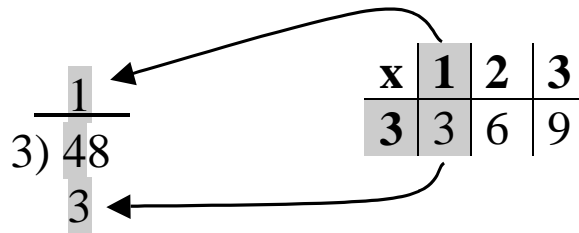


# Division

**Example**  $48 \div 3$ .

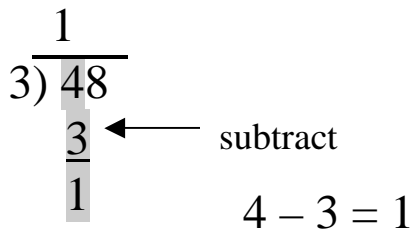
## Step 1

Divide the tens.

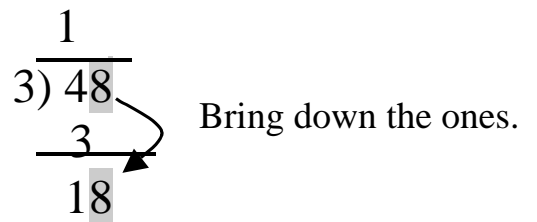


3 will fit into 4 once

## Step 2

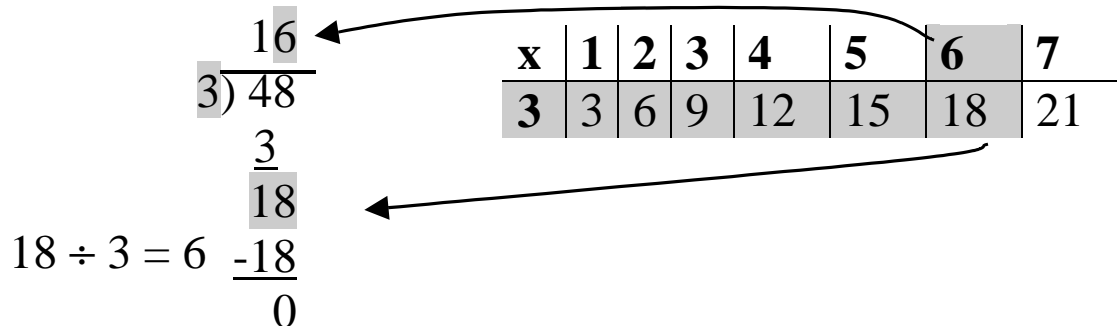


## Step 3



## Step 4

Divide the ones.



**The final answer (quotient) is 16.**

## Divide

$$2 \overline{) 48}$$

$$0 \overline{) 37}$$

$$3 \overline{) 18}$$

$$1 \overline{) 47}$$

$$3 \overline{) 54}$$

$$7 \overline{) 70}$$

$$5 \overline{) 90}$$

$$2 \overline{) 26}$$

$$8 \overline{) 32}$$

$$4 \overline{) 52}$$

$$6 \overline{) 66}$$

$$4 \overline{) 76}$$

$$4 \overline{) 44}$$

$$2 \overline{) 38}$$

$$8 \overline{) 32}$$

$$5 \overline{) 25}$$

$$2 \overline{) 94}$$

$$8 \overline{) 88}$$

$$5 \overline{) 50}$$

$$9 \overline{) 18}$$

$$3 \overline{) 75}$$

$$7 \overline{) 21}$$

$$4 \overline{) 20}$$

$$5 \overline{) 95}$$

# Real Life Math

Joanne works at a 72-car parking garage. There are 8 rows of parking spaces. Each row has the same number of parking spaces. What is the number of parking spaces per row?



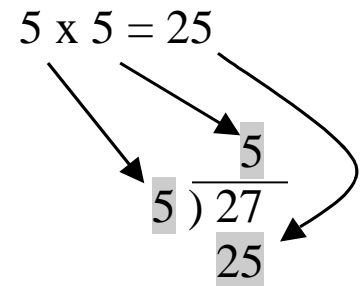
# Division

**Example**  $27 \div 5$ .

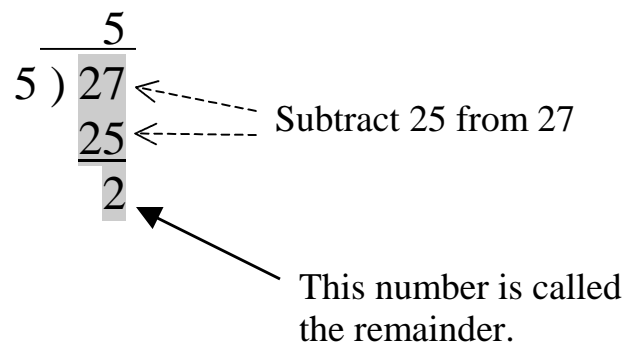
The divisor 5 does not fit evenly into the dividend 27.

X	1	2	3	4	5	6
5	5	10	15	20	25	30

As seen above,  $5 \times 5 = 25$  and  $6 \times 5 = 30$ .



25 is the largest multiple of 5 that is not greater than 27.



**The final answer (quotient) is 5 r2 .**

# Remember



The remainder is always less than the divisor.

## Divide

$$5 \overline{) 38}$$

$$4 \overline{) 14}$$

$$6 \overline{) 20}$$

$$4 \overline{) 33}$$

$$3 \overline{) 11}$$

$$2 \overline{) 13}$$

$$5 \overline{) 27}$$

$$7 \overline{) 52}$$

$$2 \overline{) 17}$$

$$8 \overline{) 54}$$

$$5 \overline{) 48}$$

$$5 \overline{) 31}$$

$$5 \overline{) 23}$$

$$8 \overline{) 79}$$

$$8 \overline{) 74}$$

$$4 \overline{) 23}$$

$$9) \overline{89}$$

$$6) \overline{50}$$

$$6) \overline{56}$$

$$3) \overline{25}$$

$$3) \overline{10}$$

$$3) \overline{16}$$

$$6) \overline{43}$$

$$4) \overline{30}$$

$$7) \overline{69}$$

$$6) \overline{39}$$

$$5) \overline{43}$$

$$6) \overline{58}$$

$$6) \overline{15}$$

$$8) \overline{70}$$

$$2) \overline{19}$$

$$8) \overline{68}$$

$$8) \overline{62}$$

$$4) \overline{27}$$

$$6) \overline{44}$$

$$4) \overline{29}$$

$$6) \overline{21}$$

$$5) \overline{39}$$

$$5) \overline{14}$$

$$7) \overline{43}$$

# Real Life Math

John works at an electronics store. He has a spool with 30 metres of wire on it. A customer would like to buy some 8-metre lengths of this wire. How many 8-metre lengths of wire can be cut off this spool? How much wire will be left over?



# Division

**Example**  $68 \div 18$ .

We know that  $18 \times 10 = 180$   
and 180 is more than 68.

This means that there will be no  
number in the tens for the  
quotient.

18 will fit into 68 three times.

<b>x</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>18</b>	18	36	54	72

  
$$\begin{array}{r} 3 \\ 18 \overline{) 68} \\ \underline{54} \\ 14 \end{array}$$

**The final answer (quotient) is 3 r14.**

## Divide

$$\overline{20) 72}$$

$$\overline{24) 84}$$

$$\overline{61) 95}$$

$$\overline{16) 62}$$

$$\overline{25) 87}$$

$$\overline{33) 85}$$

$$\overline{36) 74}$$

$$\overline{46) 96}$$

$$\overline{20) 94}$$

$$\overline{32) 95}$$

$$\overline{24) 67}$$

$$\overline{12) 55}$$

$$\overline{20) 40}$$

$$\overline{36) 89}$$

$$\overline{13) 62}$$

$$\overline{10) 63}$$

$$\overline{14) 85}$$

$$\overline{10) 88}$$

$$\overline{11) 50}$$

$$\overline{14) 18}$$

$$\overline{26) 75}$$

$$\overline{15) 49}$$

$$\overline{14) 20}$$

$$\overline{32) 95}$$

# Real Life Math

Roy has his own cleaning company with 15 employees. He has a contract to clean a 91-room building. For this job, each of his employees will clean the same number of rooms. How many rooms will each employee clean? How many rooms will be left over for Roy to take care of himself?



# Division

**Example**  $763 \div 6$ .

## Step 1

Divide the hundreds.

x	1	2	3
6	6	12	18

6 fits into 7 once.

$$\begin{array}{r} 1 \\ 6 \overline{) 763} \\ \underline{6} \phantom{00} \\ 1 \phantom{00} \end{array}$$

$7 - 6 = 1$

## Step 2

Divide the tens.

x	1	2	3
6	6	12	18

6 fits into 16 twice.

$$\begin{array}{r} 12 \\ 6 \overline{) 763} \\ \underline{6} \phantom{00} \\ 16 \phantom{00} \\ \underline{12} \phantom{00} \\ 4 \phantom{00} \end{array}$$

$16 - 12 = 4$

### Step 3

Divide the ones.

6)  $\overline{763}$

127

6

16

12

43

42

1

6 fits into 43 seven times.

$43 - 42 = 1$

x	1	2	3	4	5	6	7	8
6	6	12	18	24	30	36	42	48

**The answer (quotient) is 127 r2.**

## Remember



The quotient for any number divided by zero is always zero.

The quotient any zero divided by another number is also zero.

$$2 \div 0 = 0$$

$$0 \div 4 = 0$$

$$8 \div 0 = 0$$

## Divide

$$2 \overline{)705}$$

$$0 \overline{)529}$$

$$3 \overline{)530}$$

$$4 \overline{)476}$$

$$5 \overline{)512}$$

$$2 \overline{)563}$$

$$1 \overline{)143}$$

$$6 \overline{)640}$$

$$8 \overline{)803}$$

$$7 \overline{)834}$$

$$6 \overline{)764}$$

$$6 \overline{)604}$$

$$4 \overline{)504}$$

$$2 \overline{)359}$$

$$6 \overline{)623}$$

$$8 \overline{)808}$$

$$3 \overline{)332}$$

$$2 \overline{)540}$$

$$4 \overline{)462}$$

$$7 \overline{)853}$$

$$9 \overline{)947}$$

$$2 \overline{)375}$$

$$3 \overline{)476}$$

$$4 \overline{)444}$$

$$7 \overline{)750}$$

$$5 \overline{)517}$$

$$6 \overline{)887}$$

$$1 \overline{)158}$$

$$6 \overline{)711}$$

$$5 \overline{)476}$$

$$3 \overline{)314}$$

$$7 \overline{)864}$$

$$3 \overline{)425}$$

$$6 \overline{)670}$$

$$3 \overline{)363}$$

$$8 \overline{)886}$$

$$7 \overline{)892}$$

$$9 \overline{)963}$$

$$6 \overline{)646}$$

$$3 \overline{)388}$$

$$4 \overline{)630}$$

$$5 \overline{)526}$$

$$0 \overline{)506}$$

$$2 \overline{)370}$$

$$6 \overline{)635}$$

$$3 \overline{)445}$$

$$4 \overline{)465}$$

$$2 \overline{)487}$$

# Real Life Math

Leo works for a laundry service. Each washing machine at his site can hold a load of 9 bed sheets. Leo has received a shipment of 915 sheets to be washed. This will result in how many loads of laundry? How many sheets will be left over to make up a partial load?



# Division

**Example**  $808 \div 52$ .

We know that 52 is more than 8.

This means that there will be no number in the hundreds for the quotient.

<b>x</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>52</b>	52	104	156	208	

	1
52)	808
	52
	28

52 will fit into 80 once.

	15
52)	808
	52
	288
	260
	28

52 will fit into 288 five times.

<b>x</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>52</b>	52	104	156	208	260	312

**The final answer (quotient) is 15 r 28.**

## Divide

$$33 \overline{) 929}$$

$$29 \overline{) 355}$$

$$45 \overline{) 684}$$

$$51 \overline{) 867}$$

$$45 \overline{) 462}$$

$$82 \overline{) 831}$$

$$49 \overline{) 679}$$

$$47 \overline{) 595}$$

$$92 \overline{) 994}$$

$$60 \overline{) 675}$$

$$35 \overline{) 466}$$

$$50 \overline{) 720}$$

$$14 \overline{) 263}$$

$$78 \overline{) 859}$$

$$83 \overline{) 917}$$

$$84 \overline{) 876}$$

$$52 \overline{) 643}$$

$$82 \overline{) 955}$$

# Real Life Math

Scott drives a delivery truck for an oil company. He has 429 cases of oil at the warehouse. These have to go to 14 service stations. Each station must receive the same number of cases. How many cases of oil will Scott drop at each station? How many cases of oil will be left over?

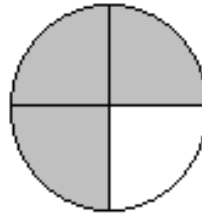


# Fractions

A fraction is used to represent an amount that is not a whole number.

A fraction can be thought of as a part of something.

Look at the following figure:



The circle is divided into four equal parts.

Three of the four parts are shaded.

This can be described using the following fraction:

$$\frac{3}{4}$$

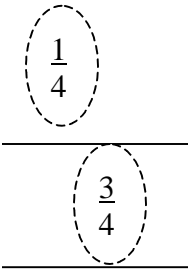
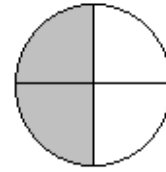
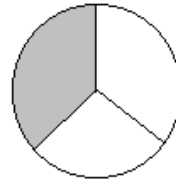
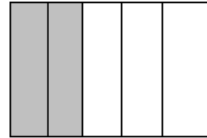
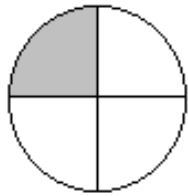
The bottom number in the fraction is called the denominator.  
This is the total number of parts

The top number in the fraction is called the numerator.  
This is the partial amount.

For the figure above, we can also use  $\frac{1}{4}$  to represent the number of parts that are not shaded.

Write a fraction below each figure that shows how much of the figure is shaded.

Write another fraction below each figure that shows how much of the figure is not shaded.



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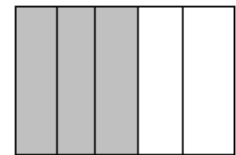
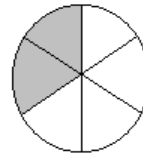
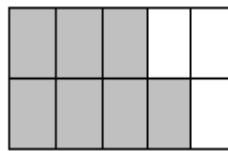
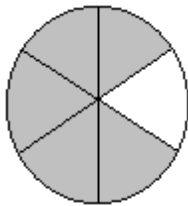
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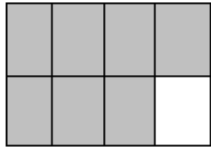
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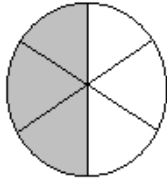
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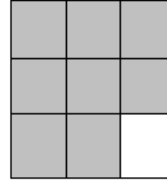
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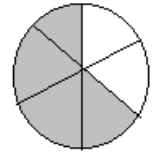
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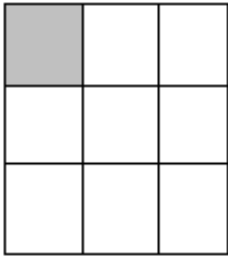
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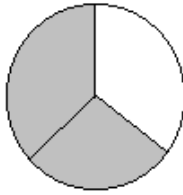
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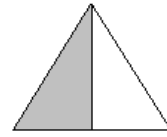
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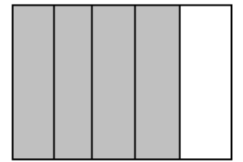
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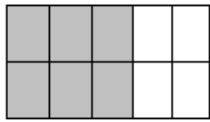
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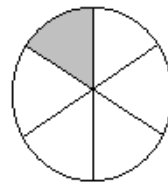
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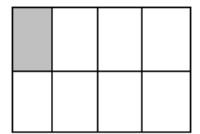
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# Fractions

Write a fraction for each of the following.

eight ninths \_\_\_\_\_ three eights \_\_\_\_\_ one third \_\_\_\_\_

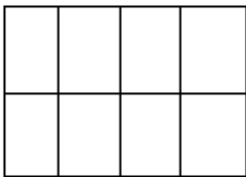
five ninths \_\_\_\_\_ two sevenths \_\_\_\_\_ one quarter \_\_\_\_\_

two thirds \_\_\_\_\_ five eighths \_\_\_\_\_ nine tenths \_\_\_\_\_

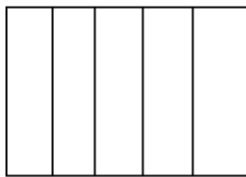
one sixth \_\_\_\_\_ one half \_\_\_\_\_ four fifths \_\_\_\_\_

Shade or colour each picture to reflect the fraction.

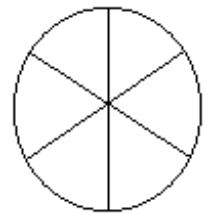
$$\frac{1}{8}$$



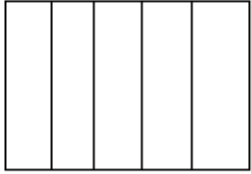
$$\frac{4}{5}$$



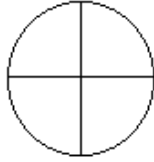
$$\frac{4}{6}$$



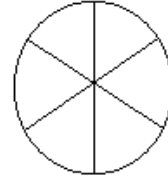
$$\frac{3}{5}$$



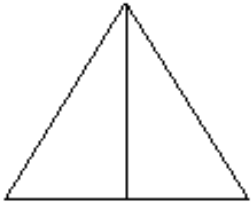
$$\frac{2}{4}$$



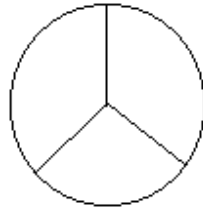
$$\frac{1}{6}$$



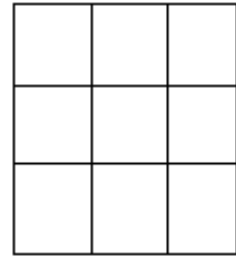
$$\frac{1}{2}$$



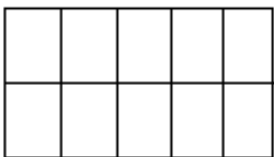
$$\frac{1}{3}$$



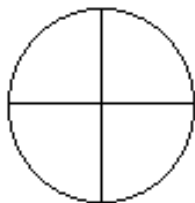
$$\frac{8}{9}$$



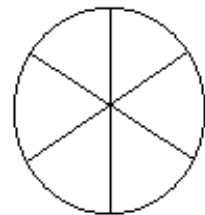
$$\frac{3}{10}$$



$$\frac{1}{4}$$



$$\frac{5}{6}$$

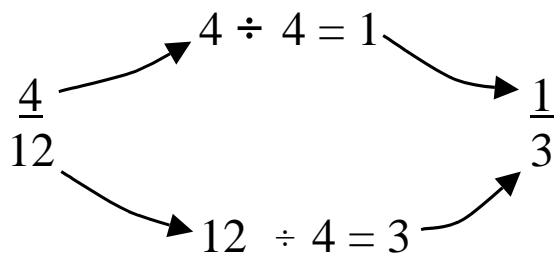


# Converting Fractions to their Simplest Forms

A fraction is in its simplest form when the only whole number that will divide into both the numerator and the denominator is 1.

For example, the fraction  $\frac{4}{12}$  is not in its simplest form.

The numerator and denominator can both be divided by 4.



Thus, the simplest form of  $\frac{4}{12}$  is  $\frac{1}{3}$ .

**Convert each fraction to its simplest form.**

$$\frac{2}{4}$$

$$\frac{24}{88}$$

$$\frac{23}{46}$$

$$\frac{9}{54}$$

$$\frac{7}{14}$$

$$\frac{27}{81}$$

$$\frac{6}{18}$$

$$\frac{2}{26}$$

$$\frac{4}{68}$$

$$\frac{40}{72}$$

$$\frac{30}{50}$$

$$\frac{66}{99}$$

$$\frac{12}{30}$$

$$\frac{6}{9}$$

$$\frac{14}{21}$$

$$\frac{55}{90}$$

$$\frac{24}{40}$$

$$\frac{18}{96}$$

$$\frac{12}{16}$$

$$\frac{3}{9}$$

$$\frac{11}{66}$$

$$\frac{10}{40}$$

$$\frac{25}{75}$$

$$\frac{9}{36}$$

# Mixed Numbers

Look at the fraction  $\frac{14}{3}$  .

In this case, the numerator is greater than the denominator.

This fraction can also be expressed as a mixed number. It combines a whole number with a fraction.

This fraction can be thought of as  $14 \div 3$  .

To convert it to a mixed number:

$$3 \overline{)14} \begin{array}{r} 4 \\ \underline{12} \\ 2 \end{array}$$
$$4 \frac{2}{3}$$

Therefore, the fraction  $\frac{14}{3}$  can also be represented using the mixed number  $4 \frac{2}{3}$  .

Convert the following fractions to mixed numbers.

$$\frac{12}{9}$$

$$\frac{86}{6}$$

$$\frac{49}{4}$$

$$\frac{37}{4}$$

$$\frac{24}{9}$$

$$1 \frac{1}{3}$$

$$\frac{81}{6}$$

$$\frac{72}{7}$$

$$\frac{86}{8}$$

$$\frac{72}{5}$$

$$\frac{42}{9}$$

$$\frac{40}{6}$$

$$\frac{28}{3}$$

$$\frac{16}{6}$$

$$\frac{7}{2}$$

$$\frac{51}{2}$$

$$\frac{12}{7}$$

$$\frac{37}{9}$$

$$\frac{84}{8}$$

$$\frac{3}{2}$$

$$\frac{92}{3}$$

$$\frac{62}{6}$$

$$\frac{45}{4}$$

$$\frac{97}{6}$$

$$\frac{39}{6}$$

$$\frac{63}{4}$$

$$\frac{59}{7}$$

$$\frac{33}{7}$$

$$\frac{69}{4}$$

$$\frac{35}{6}$$

$$\frac{18}{7}$$

$$\frac{83}{3}$$

$$\frac{9}{4}$$

$$\frac{24}{7}$$

$$\frac{7}{4}$$

$$\frac{18}{8}$$

$$\frac{21}{2}$$

$$\frac{90}{7}$$

$$\frac{37}{9}$$

$$\frac{41}{3}$$

$$\frac{10}{3}$$

$$\frac{14}{6}$$

$$\frac{38}{3}$$

$$\frac{79}{2}$$

$$\frac{82}{4}$$

$$\frac{50}{6}$$

$$\frac{25}{3}$$

$$\frac{20}{7}$$

$$\frac{34}{4}$$

$$\frac{75}{2}$$

$$\frac{81}{5}$$

$$\frac{67}{9}$$

$$\frac{74}{5}$$

$$\frac{31}{3}$$

$$\frac{74}{9}$$

$$\frac{53}{2}$$

$$\frac{73}{7}$$

$$\frac{57}{9}$$

$$\frac{35}{9}$$

$$\frac{56}{3}$$

$$\frac{69}{7}$$

# Adding Fractions

## Example

$$\frac{3}{7} + \frac{1}{7}$$

When you are adding fractions with the same denominator, add the numerators.

$$3 + 1 = 4$$

$$\frac{\boxed{3}}{7} + \frac{\boxed{1}}{7} = \frac{\boxed{4}}{7}$$

Use the same denominator.

The final answer is  $\frac{4}{7}$ .

**Add the fractions.**

$$\frac{2}{9} + \frac{2}{9}$$

$$\frac{2}{5} + \frac{2}{5}$$

$$\frac{2}{7} + \frac{2}{7}$$

$$\frac{3}{7} + \frac{3}{7}$$

$$\frac{3}{10} + \frac{7}{10}$$

$$\frac{3}{8} + \frac{1}{8}$$

$$\frac{1}{6} + \frac{5}{6}$$

$$\frac{5}{8} + \frac{1}{8}$$

$$\frac{5}{6} + \frac{5}{6}$$

$$\frac{5}{8} + \frac{3}{8}$$

$$\frac{1}{9} + \frac{4}{9}$$

$$\frac{1}{5} + \frac{2}{5}$$

# Real Life Math

Ron is landscaping his garden. He has two pieces of wooden border that are each  $\frac{2}{3}$  of a metre in length. What is the total length of wooden border that Ron has on hand?



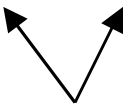
# Adding Fractions with Different Denominators

## Example

$$\frac{2}{3} + \frac{3}{4}$$

### Step 1

Find the lowest common denominator.

$$\frac{2}{3} + \frac{3}{4}$$


Both 3 and 4 can divide into 12.

### Step 2

Convert both fractions.

$$\frac{2}{3} \text{ is the same as } \frac{8}{12} .$$

$$\frac{3}{4} \text{ is the same as } \frac{9}{12} .$$

### Step 3

Add the converted fractions.

$$\frac{8}{12} + \frac{9}{12} = \frac{17}{12} = 1 \frac{5}{12}$$

The final answer is  $1 \frac{5}{12}$ .

## Remember



to convert final answer fractions to their simplest forms.

**Add the fractions.**

$$\frac{1}{3} + \frac{1}{2}$$

$$\frac{2}{3} + \frac{1}{7}$$

$$\frac{2}{3} + \frac{1}{9}$$

$$\frac{1}{2} + \frac{2}{9}$$

$$\frac{1}{6} + \frac{5}{7}$$

$$\frac{5}{7} + \frac{3}{4}$$

$$\frac{3}{7} + \frac{1}{3}$$

$$\frac{2}{7} + \frac{2}{9}$$

$$\frac{2}{9} + \frac{1}{6}$$

$$\frac{8}{9} + \frac{1}{2}$$

$$\frac{1}{3} + \frac{5}{6}$$

$$\frac{1}{8} + \frac{2}{5}$$

$$\frac{3}{4} + \frac{1}{2}$$

$$\frac{7}{9} + \frac{1}{3}$$

$$\frac{2}{3} + \frac{1}{2}$$

$$\frac{1}{2} + \frac{1}{4}$$

# Real Life Math

Adam is a cook at a restaurant. He is working with a recipe that calls for  $\frac{3}{4}$  of a cup of water and  $\frac{1}{3}$  of a cup of milk. How much liquid will Adam add to the saucepan?



# Subtracting Fractions

## Example

$$\frac{5}{7} - \frac{2}{7}$$

When you are subtracting fractions with the same denominator, subtract the numerators.

$$5 - 2 = 3$$

$$\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$$

Use the same denominator.

The final answer is  $\frac{3}{7}$ .

**Subtract the fractions.**

$$\frac{4}{7} - \frac{3}{7}$$

$$\frac{5}{8} - \frac{1}{8}$$

$$\frac{7}{8} - \frac{3}{8}$$

$$\frac{2}{5} - \frac{1}{5}$$

$$\frac{5}{8} - \frac{2}{8}$$

$$\frac{4}{7} - \frac{2}{7}$$

$$\frac{7}{10} - \frac{3}{10}$$

$$\frac{4}{5} - \frac{2}{5}$$

$$\frac{9}{10} - \frac{3}{10}$$

$$\frac{5}{9} - \frac{4}{9}$$

$$\frac{4}{9} - \frac{1}{9}$$

$$\frac{3}{5} - \frac{2}{5}$$

# Real Life Math

Holly works at a fabric store. She has a roll of material that is

$\frac{4}{5}$  of a metre in length. She cuts off  $\frac{1}{5}$  of a metre. How much material is left on the roll?



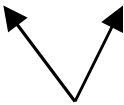
# Subtracting Fractions with Different Denominators

## Example

$$\frac{1}{2} - \frac{2}{5}$$

### Step 1

Find the lowest common denominator.

$$\frac{1}{2} - \frac{2}{5}$$


Both 2 and 5 can divide into 10.

### Step 2

Convert both fractions.

$$\frac{1}{2} \text{ is the same as } \frac{5}{10} .$$

$$\frac{2}{5} \text{ is the same as } \frac{4}{10} .$$

### Step 3

Subtract the converted fractions.

$$\frac{5}{10} - \frac{4}{10} = \frac{1}{10}$$

The final answer is  $\frac{1}{10}$ .

## Remember



Convert final answer fractions to their simplest forms.

**Subtract the fractions.**

$$\frac{1}{2} - \frac{1}{5}$$

$$\frac{9}{10} - \frac{1}{9}$$

$$\frac{2}{3} - \frac{3}{5}$$

$$\frac{7}{9} - \frac{3}{8}$$

$$\frac{3}{7} - \frac{1}{9}$$

$$\frac{3}{4} - \frac{4}{7}$$

$$\frac{5}{7} - \frac{3}{10}$$

$$\frac{3}{5} - \frac{1}{2}$$

$$\frac{3}{5} - \frac{1}{3}$$

$$\frac{3}{4} - \frac{2}{3}$$

$$\frac{3}{10} - \frac{1}{9}$$

$$\frac{4}{5} - \frac{2}{3}$$

$$\frac{5}{7} - \frac{1}{2}$$

$$\frac{5}{6} - \frac{1}{2}$$

$$\frac{5}{7} - \frac{5}{9}$$

$$\frac{7}{10} - \frac{1}{4}$$

$$\frac{3}{8} - \frac{1}{9}$$

$$\frac{1}{3} - \frac{1}{9}$$

$$\frac{2}{5} - \frac{1}{4}$$

$$\frac{5}{9} - \frac{1}{8}$$

$$\frac{4}{5} - \frac{1}{8}$$

$$\frac{7}{9} - \frac{3}{10}$$

$$\frac{5}{7} - \frac{3}{5}$$

$$\frac{4}{9} - \frac{2}{5}$$

$$\frac{3}{4} - \frac{1}{3}$$

$$\frac{3}{4} - \frac{1}{2}$$

$$\frac{3}{4} - \frac{3}{7}$$

$$\frac{3}{8} - \frac{1}{5}$$

$$\frac{2}{7} - \frac{1}{5}$$

$$\frac{2}{3} - \frac{2}{7}$$

$$\frac{1}{2} - \frac{1}{4}$$

$$\frac{4}{5} - \frac{1}{7}$$

$$\frac{2}{5} - \frac{1}{3}$$

$$\frac{7}{10} - \frac{1}{2}$$

$$\frac{5}{8} - \frac{5}{9}$$

$$\frac{9}{10} - \frac{5}{9}$$

$$\frac{3}{4} - \frac{4}{9}$$

$$\frac{2}{3} - \frac{3}{10}$$

$$\frac{4}{5} - \frac{1}{2}$$

$$\frac{1}{3} - \frac{1}{5}$$

$$\frac{8}{9} - \frac{6}{7}$$

$$\frac{3}{7} - \frac{1}{3}$$

# Real Life Math

Mark is a heavy equipment operator. When he arrived, there was  $\frac{4}{5}$  of a barrel of fuel at the job site. He uses  $\frac{1}{4}$  of a barrel of fuel that morning. How much fuel will be left in the barrel by noon?



# Multiplying Fractions

## Example

$$\frac{1}{2} \times \frac{1}{4}$$

This is the same as saying  $\frac{1}{2}$  of  $\frac{1}{4}$  .

## Step 1

Multiply the denominators.

$$2 \times 4 = 8$$

$$\frac{1}{2} \times \frac{1}{4} = \frac{\quad}{8}$$

## Step 2

Multiply the numerators.

$$1 \times 1 = 1$$

$$\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$$

The final answer is  $\frac{1}{8}$  .

# Remember



to convert fractions to their simplest forms.

**Multiply the fractions.**

$$\frac{3}{4} \times \frac{3}{7}$$

$$\frac{8}{9} \times \frac{1}{7}$$

$$\frac{3}{5} \times \frac{5}{6}$$

$$\frac{4}{5} \times \frac{1}{9}$$

$$\frac{5}{8} \times \frac{1}{2}$$

$$\frac{7}{8} \times \frac{1}{2}$$

$$\frac{3}{5} \times \frac{4}{9}$$

$$\frac{2}{7} \times \frac{1}{2}$$

$$\frac{3}{5} \times \frac{4}{5}$$

$$\frac{1}{3} \times \frac{3}{4}$$

$$\frac{1}{2} \times \frac{4}{9}$$

$$\frac{1}{2} \times \frac{5}{9}$$

$$\frac{4}{5} \times \frac{7}{8}$$

$$\frac{1}{2} \times \frac{1}{6}$$

$$\frac{1}{2} \times \frac{3}{10}$$

$$\frac{9}{10} \times \frac{4}{5}$$

$$\frac{2}{3} \times \frac{3}{7}$$

$$\frac{1}{5} \times \frac{2}{3}$$

$$\frac{1}{3} \times \frac{4}{9}$$

$$\frac{1}{9} \times \frac{1}{6}$$

$$\frac{1}{2} \times \frac{3}{8}$$

$$\frac{5}{8} \times \frac{2}{5}$$

# Real Life Math

Peter is a plumber. He cuts a piece of pipe that is  $\frac{2}{3}$  of a metre in length. He needs to cut another piece of pipe that is  $\frac{1}{2}$  the length of the first piece. What would be the length of the second piece of pipe?



# Multiplication of a Whole Number by a Fraction

## Example

$$9 \times \frac{2}{5}$$

This is the same as saying  $\frac{9}{1} \times \frac{2}{5}$ .

## Step 1

Multiply the numerator by the whole number.

$$9 \times 2 = 18$$

$$9 \times \frac{2}{5} = \frac{18}{5}$$

## Step 2

Reduce the answer to its simplest form.

$$3 \frac{3}{5}$$

**Multiply the fractions.**

$$9 \times \frac{2}{3}$$

$$16 \times \frac{3}{7}$$

$$10 \times \frac{3}{8}$$

$$8 \times \frac{1}{3}$$

$$1 \times \frac{5}{6}$$

$$16 \times \frac{2}{3}$$

$$13 \times \frac{2}{7}$$

$$11 \times \frac{2}{3}$$

$$12 \times \frac{1}{2}$$

$$12 \times \frac{8}{9}$$

$$10 \times \frac{3}{10}$$

$$7 \times \frac{1}{7}$$

$$17 \times \frac{2}{3}$$

$$17 \times \frac{2}{5}$$

$$16 \times \frac{1}{2}$$

$$4 \times \frac{1}{3}$$

$$18 \times \frac{3}{4}$$

$$2 \times \frac{4}{5}$$

$$17 \times \frac{3}{10}$$

$$11 \times \frac{4}{5}$$

$$10 \times \frac{7}{8}$$

$$18 \times \frac{4}{5}$$

$$13 \times \frac{9}{10}$$

$$14 \times \frac{4}{5}$$

# Real Life Math

Brian works at a machine shop. He has just received a case that contains 24 cartons of screws. Each carton of screws weighs  $\frac{2}{3}$  of a kilogram. What is the weight of the whole case of screws?



## Multiplication of a Whole Number by a Mixed Number

### Example

$$2 \times 2 \frac{1}{7}$$

#### Step 1

Convert the mixed number to a fraction.

$$2 \times \frac{15}{7}$$

#### Step 2

Multiply the fraction by the whole number.

$$2 \times \frac{15}{7} = \frac{30}{7}$$

#### Step 3

Reduce the answer to its simplest form.

$$4 \frac{2}{7}$$

**Multiply the following.**

$$19 \times 4\frac{1}{2}$$

$$13 \times 4\frac{1}{2}$$

$$14 \times 10\frac{8}{9}$$

$$16 \times 3\frac{2}{3}$$

$$6 \times 9\frac{3}{10}$$

$$12 \times 8\frac{3}{5}$$

$$15 \times 4\frac{4}{5}$$

$$14 \times 5\frac{1}{3}$$

$$8 \times 4\frac{6}{7}$$

$$4 \times 5\frac{1}{4}$$

$$4 \times 5\frac{1}{2}$$

$$9 \times 8\frac{3}{4}$$

$$10 \times 4 \frac{9}{10}$$

$$8 \times 3 \frac{4}{5}$$

$$13 \times 2 \frac{3}{4}$$

$$16 \times 10 \frac{2}{5}$$

$$12 \times 5 \frac{1}{9}$$

$$4 \times 2 \frac{8}{9}$$

$$9 \times 9 \frac{3}{4}$$

$$19 \times 9 \frac{1}{2}$$

$$18 \times 1 \frac{2}{5}$$

$$11 \times 3 \frac{6}{7}$$

$$15 \times 10 \frac{2}{9}$$

$$18 \times 4 \frac{3}{8}$$

# Real Life Math

Jeff owns a powerboat. He plans to make 15 boating trips in the coming season. Jeff expects to use  $2 \frac{1}{4}$  litres of oil per trip.

How much oil will he need for the boating season?



# Reciprocals

If you take any fraction and flip it over, the result is called the reciprocal.

For example,

The reciprocal of  $\frac{2}{3}$  is  $\frac{3}{2}$  or  $1\frac{1}{2}$ .

The reciprocal of  $\frac{1}{8}$  is  $\frac{8}{1}$  or 8.

## Remember



The product of any number and its reciprocal always equals 1.

For example,

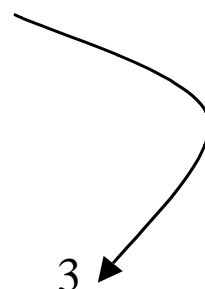
$$\frac{2}{3} \times \frac{3}{2} = 1$$

$$\frac{3}{8} \times \frac{8}{3} = 1$$

# Dividing by Fractions

## Example

$$\frac{5}{6} \div \frac{2}{3}$$



### Step 1

Find the reciprocal of the divisor.

$$\frac{3}{2}$$

### Step 2

Multiply the dividend by the reciprocal found in step 1.

$$\frac{5}{6} \times \frac{3}{2} = \frac{15}{12} \quad \text{or} \quad 1 \frac{1}{4}$$

The final answer is  $1 \frac{1}{4}$ .

# Remember

Convert mixed or whole numbers to fractions when dividing with fractions.



For example,

convert  $2\frac{1}{3} \div \frac{3}{4}$  to  $\frac{7}{3} \div \frac{3}{4}$

convert  $\frac{1}{3} \div 1\frac{1}{3}$  to  $\frac{1}{3} \div \frac{4}{3}$

convert  $3\frac{1}{3} \div 1\frac{1}{2}$  to  $\frac{10}{3} \div \frac{3}{2}$

convert  $\frac{5}{9} \div 5$  to  $\frac{5}{9} \div \frac{5}{1}$

## Divide

$$\frac{5}{8} \div \frac{1}{2}$$

$$\frac{1}{2} \div \frac{5}{8}$$

$$\frac{1}{7} \div \frac{2}{3}$$

$$\frac{3}{7} \div \frac{7}{8}$$

$$\frac{3}{5} \div \frac{2}{3}$$

$$\frac{5}{6} \div \frac{1}{5}$$

$$\frac{7}{9} \div 2\frac{1}{2}$$

$$\frac{2}{7} \div 4$$

$$1\frac{1}{5} \div \frac{1}{6}$$

$$1\frac{4}{5} \div \frac{1}{8}$$

$$3 \div \frac{6}{7}$$

$$\frac{1}{3} \div 2$$

$$\frac{5}{9} \div 3$$

$$\frac{7}{9} \div 7$$

$$\frac{3}{4} \div \frac{1}{3}$$

$$\frac{4}{9} \div \frac{2}{3}$$

$$\frac{1}{10} \div 1\frac{1}{3}$$

$$\frac{1}{3} \div \frac{1}{2}$$

$$1\frac{1}{9} \div \frac{1}{5}$$

$$\frac{1}{4} \div \frac{1}{2}$$

$$\frac{1}{2} \div \frac{5}{8}$$

$$\frac{2}{5} \div \frac{2}{3}$$

$$\frac{2}{5} \div \frac{1}{5}$$

$$1\frac{2}{3} \div 3$$

# Real life Math

Ed is a baker. He has  $\frac{3}{4}$  of a cup of flavouring to make cookies.  
Ed puts all of the flavouring in 4 bowls. Each bowl contains the same amount. How much flavouring is in each bowl?



# Decimals

Decimals are used to represent fractions.

The number 0.1 represents  $\frac{1}{10}$  or one tenth.

The number 0.01 represents  $\frac{1}{100}$  or one one hundredth.

The number 0.001 represents  $\frac{1}{1000}$  or one one thousandth.

**Thousands   hundreds   tens   .   tenths   hundredths   thousandths**  
**decimal**

For example, look at the number 1.432

The first number to the right of the decimal is in the tenths place.

The 4 represents 4 tenths or  $\frac{4}{10}$

The second number to the right of the decimal is in the one one hundredths place.

The 3 represents 3 one hundredths or  $\frac{3}{100}$

The third number to the right of the decimal is in the one one thousandths place.

The 2 represents 2 one thousandths or  $\frac{2}{1000}$

**Change each fraction to a decimal.**

$$\frac{\underline{8}}{10}$$

$$\frac{\underline{1}}{10}$$

$$\frac{\underline{3}}{10}$$

$$\frac{\underline{9}}{10}$$

$$\frac{\underline{2}}{10}$$

$$\frac{\underline{4}}{10}$$

$$\frac{\underline{5}}{10}$$

$$\frac{\underline{7}}{10}$$

$$\frac{\underline{37}}{100}$$

$$\frac{\underline{97}}{100}$$

$$\frac{\underline{52}}{100}$$

$$\frac{\underline{66}}{100}$$

$$\frac{\underline{78}}{100}$$

$$\frac{\underline{83}}{100}$$

$$\frac{\underline{88}}{100}$$

$$\frac{\underline{45}}{100}$$

$$\frac{\underline{50}}{100}$$

$$\frac{\underline{54}}{100}$$

$$\frac{\underline{59}}{100}$$

$$\frac{\underline{69}}{100}$$

$$\frac{\underline{369}}{1000}$$

$$\frac{\underline{856}}{1000}$$

$$\frac{\underline{688}}{1000}$$

$$\frac{\underline{897}}{1000}$$

$$\frac{\underline{361}}{1000}$$

$$\frac{\underline{172}}{1000}$$

$$\frac{\underline{212}}{1000}$$

$$\frac{\underline{494}}{1000}$$

**Write a fraction for each of the following.**

0.9

0.6

0.5

0.2

2.7

3.8

1.3

2.1

0.81

0.92

0.94

0.83

0.58

0.62

0.98

0.71

4.97

1.11

2.71

8.42

0.386

0.585

0.652

0.238

0.212

4.174

3.492

2.184

# Adding Decimals

**Example**       $3.4 + 9.2$

## Step 1

Position the numbers so that the decimals line up.

$$\begin{array}{r} 3.4 \\ + 9.2 \\ \hline \end{array}$$

## Step 2

Add the numbers.

$$\begin{array}{r} 3.4 \\ + 9.2 \\ \hline 12.6 \end{array}$$

## Step 3

Place a decimal in the answer in line with the numbers above.

$$\begin{array}{r} 3.4 \\ + 9.2 \\ \hline 12.6 \end{array}$$

**The final answer is 12.6**

# Remember



Insert 0 into any empty space when numbers are lined up by decimals.

For example

convert

$$\begin{array}{r} 5.54 \\ + 7.6 \\ \hline \end{array}$$

to

$$\begin{array}{r} 5.54 \\ + 7.60 \\ \hline \end{array}$$

convert

$$\begin{array}{r} 4.315 \\ + 4.5 \\ \hline \end{array}$$

to

$$\begin{array}{r} 4.315 \\ + 4.500 \\ \hline \end{array}$$

**Add the numbers.**

$$\begin{array}{r} 2.7 \\ + 6.2 \\ \hline \end{array}$$

$$\begin{array}{r} 2.2 \\ + 8.3 \\ \hline \end{array}$$

$$\begin{array}{r} 2.5 \\ + 5.5 \\ \hline \end{array}$$

$$\begin{array}{r} 3.4 \\ + 6.1 \\ \hline \end{array}$$

$$\begin{array}{r} 8.8 \\ + 1.7 \\ \hline \end{array}$$

$$\begin{array}{r} 9.8 \\ + 6.2 \\ \hline \end{array}$$

$$\begin{array}{r} 4.7 \\ + 4.6 \\ \hline \end{array}$$

$$\begin{array}{r} 8.6 \\ + 4.5 \\ \hline \end{array}$$

$$\begin{array}{r} 1.8 \\ + 7.6 \\ \hline \end{array}$$

$$\begin{array}{r} 9.3 \\ + 1.3 \\ \hline \end{array}$$

$$\begin{array}{r} 9.6 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4.3 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 3.63 \\ + 9.39 \\ \hline \end{array}$$

$$\begin{array}{r} 9.17 \\ + 2.55 \\ \hline \end{array}$$

$$\begin{array}{r} 7.02 \\ + 9.21 \\ \hline \end{array}$$

$$\begin{array}{r} 5.07 \\ + 4.12 \\ \hline \end{array}$$

$$\begin{array}{r} 4.07 \\ + 1.4 \\ \hline \end{array}$$

$$\begin{array}{r} 2.97 \\ + 4.1 \\ \hline \end{array}$$

$$\begin{array}{r} 9.84 \\ + 5.52 \\ \hline \end{array}$$

$$\begin{array}{r} 5.49 \\ + 8.87 \\ \hline \end{array}$$

$$\begin{array}{r} 9.303 \\ + 5.840 \\ \hline \end{array}$$

$$\begin{array}{r} 2.765 \\ + 8.397 \\ \hline \end{array}$$

$$\begin{array}{r} 7.537 \\ + 4.911 \\ \hline \end{array}$$

$$\begin{array}{r} 9.299 \\ + 4.471 \\ \hline \end{array}$$

$$\begin{array}{r} 7.607 \\ + 7.39 \\ \hline \end{array}$$

$$\begin{array}{r} 1.123 \\ + 3.32 \\ \hline \end{array}$$

$$\begin{array}{r} 2.402 \\ + 7.025 \\ \hline \end{array}$$

$$\begin{array}{r} 4.544 \\ + 6.77 \\ \hline \end{array}$$

$$\begin{array}{r} 8.187 \\ + 2.87 \\ \hline \end{array}$$

$$\begin{array}{r} 5.275 \\ + 2.546 \\ \hline \end{array}$$

$$\begin{array}{r} 2.168 \\ + 1.675 \\ \hline \end{array}$$

$$\begin{array}{r} 8.406 \\ + 1.927 \\ \hline \end{array}$$

# Real Life Math

Art works with metal. He has a sheet of tin that is 0.37 centimetres thick. He has another sheet that is 0.26 centimetres thick. If one sheet is placed on top of the other, what is the combined thickness?



# Subtracting Decimals

**Example**       $4.6 - 3.2$

## Step 1

Position the numbers so that the decimals line up.

$$\begin{array}{r} 4.6 \\ - 3.2 \\ \hline \end{array}$$

## Step 2

Subtract the numbers.

$$\begin{array}{r} 4.6 \\ - 3.2 \\ \hline 1.4 \end{array}$$

## Step 3

Place a decimal in the answer in line with the numbers above.

$$\begin{array}{r} 4.6 \\ - 3.2 \\ \hline 1.4 \end{array}$$

**The final answer is 1.4**

**Subtract the numbers.**

$$\begin{array}{r} 8.7 \\ - 7.1 \\ \hline \end{array}$$

$$\begin{array}{r} 7.5 \\ - 5.3 \\ \hline \end{array}$$

$$\begin{array}{r} 9.6 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4.8 \\ - 4.1 \\ \hline \end{array}$$

$$\begin{array}{r} 8.6 \\ - 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9.3 \\ - 7.2 \\ \hline \end{array}$$

$$\begin{array}{r} 8.2 \\ - 2.1 \\ \hline \end{array}$$

$$\begin{array}{r} 9.2 \\ - 3.2 \\ \hline \end{array}$$

$$\begin{array}{r} 4.29 \\ - 1.26 \\ \hline \end{array}$$

$$\begin{array}{r} 8.45 \\ - 3.98 \\ \hline \end{array}$$

$$\begin{array}{r} 7.11 \\ - 6.93 \\ \hline \end{array}$$

$$\begin{array}{r} 8.21 \\ - 1.91 \\ \hline \end{array}$$

$$\begin{array}{r} 8.49 \\ - 2.29 \\ \hline \end{array}$$

$$\begin{array}{r} 4.15 \\ - 2.9 \\ \hline \end{array}$$

$$\begin{array}{r} 9.86 \\ - 8.98 \\ \hline \end{array}$$

$$\begin{array}{r} 6.71 \\ - 5.7 \\ \hline \end{array}$$

$$\begin{array}{r} 9.774 \\ - 3.684 \\ \hline \end{array}$$

$$\begin{array}{r} 5.545 \\ - 2.497 \\ \hline \end{array}$$

$$\begin{array}{r} 4.448 \\ - 3.786 \\ \hline \end{array}$$

$$\begin{array}{r} 7.975 \\ - 4.427 \\ \hline \end{array}$$

$$\begin{array}{r} 4.478 \\ - 3.67 \\ \hline \end{array}$$

$$\begin{array}{r} 3.519 \\ - 1.49 \\ \hline \end{array}$$

$$\begin{array}{r} 7.843 \\ - 1.882 \\ \hline \end{array}$$

$$\begin{array}{r} 7.967 \\ - 1.741 \\ \hline \end{array}$$

# Real Life Math

Pete is a mechanic. He takes a spark plug out of an engine and measures its gap. The gap is 2.21 millimetres. The manual for that engine states that spark plug gap should measure 0.97 millimetres. The gap is too large by how much?



# Multiplying Decimals

**Example**       $4.21 \times 5.3$

## Step 1

Multiply as whole numbers.

$$\begin{array}{r} 4.21 \\ \times 5.3 \\ \hline 1263 \\ 21050 \\ \hline 22313 \end{array}$$

## Step 2

Count the number of digits in the equation that are to the right of decimals.

$$\begin{array}{r} 4.21 \\ \times 5.3 \\ \hline \end{array}$$

There are **3 numbers** in the equation to the right of decimals.

## Step 3

Take the product from Step 1.

Use the sum found in Step 2 - count from the right and place the decimal.

$$22.313$$

**The final answer is 22.313**

**Multiply the numbers.**

$$\begin{array}{r} 6.59 \\ \times 1.41 \\ \hline \end{array}$$

$$\begin{array}{r} 5.29 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 3.11 \\ \times 99.4 \\ \hline \end{array}$$

$$\begin{array}{r} 53.3 \\ \times 4.31 \\ \hline \end{array}$$

$$\begin{array}{r} 19.5 \\ \times 80.1 \\ \hline \end{array}$$

$$\begin{array}{r} 6.76 \\ \times 4.06 \\ \hline \end{array}$$

$$\begin{array}{r} 1.27 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 1.80 \\ \times 3.1 \\ \hline \end{array}$$

$$\begin{array}{r} 70.2 \\ \times 8.78 \\ \hline \end{array}$$

$$\begin{array}{r} 86.9 \\ \times 39.3 \\ \hline \end{array}$$

$$\begin{array}{r} 5.11 \\ \times 5.86 \\ \hline \end{array}$$

$$\begin{array}{r} 5.36 \\ \times 795 \\ \hline \end{array}$$

$$\begin{array}{r} 6.32 \\ \times 78.6 \\ \hline \end{array}$$

$$\begin{array}{r} 41.7 \\ \times 7.62 \\ \hline \end{array}$$

$$\begin{array}{r} 71.1 \\ \times 8.80 \\ \hline \end{array}$$

$$\begin{array}{r} 6.43 \\ \times 4.03 \\ \hline \end{array}$$

$$\begin{array}{r} 1.23 \\ \times 62 \\ \hline \end{array}$$

$$\begin{array}{r} 3.92 \\ \times 3.6 \\ \hline \end{array}$$

$$\begin{array}{r} 91.3 \\ \times 1.64 \\ \hline \end{array}$$

$$\begin{array}{r} 20.2 \\ \times 2.2 \\ \hline \end{array}$$

$$\begin{array}{r} 8.52 \\ \times 2.45 \\ \hline \end{array}$$

$$\begin{array}{r} 3.96 \\ \times 207 \\ \hline \end{array}$$

$$\begin{array}{r} 5.59 \\ \times 98.5 \\ \hline \end{array}$$

$$\begin{array}{r} 65.5 \\ \times 8.08 \\ \hline \end{array}$$

$$\begin{array}{r} 76.6 \\ \times 55.8 \\ \hline \end{array}$$

$$\begin{array}{r} 2.27 \\ \times 730 \\ \hline \end{array}$$

$$\begin{array}{r} 4.73 \\ \times 45.6 \\ \hline \end{array}$$

$$\begin{array}{r} 2.75 \\ \times 59.6 \\ \hline \end{array}$$

$$\begin{array}{r} 370 \\ \times 1.44 \\ \hline \end{array}$$

$$\begin{array}{r} 69.5 \\ \times 99.5 \\ \hline \end{array}$$

# Real Life Math

Doug is a logger. He cuts a log that weighs 51.2 kilograms. Doug will send 0.75 of this log to be processed. What is the weight of the wood to be processed?



# Dividing Decimals

**Example**       $4.68 \div 3$

## Step 1

Divide the dividend as a whole number.

$$\begin{array}{r} \underline{156} \\ 3 \overline{)4.68} \\ \underline{3} \phantom{00} \\ 16 \phantom{00} \\ \underline{15} \phantom{00} \\ 18 \phantom{00} \\ \underline{18} \phantom{00} \\ 0 \end{array}$$

## Step 2

Place the decimal in the quotient above the decimal in the dividend.

$$\begin{array}{r} \underline{1.56} \\ 3 \overline{)4.68} \\ \underline{3} \phantom{00} \\ 16 \phantom{00} \\ \underline{15} \phantom{00} \\ 18 \phantom{00} \\ \underline{18} \phantom{00} \\ 0 \end{array}$$

**The final answer is 1.56**

**Divide the numbers.**

$$5.54 \div 2$$

$$63.8 \div 2$$

$$0.843 \div 3$$

$$0.118 \div 2$$

$$78.5 \div 5$$

$$9.96 \div 3$$

$$5.14 \div 2$$

$$86.4 \div 3$$

$$0.415 \div 5$$

$$0.155 \div 5$$

$$15.3 \div 3$$

$$5.38 \div 2$$

$$1.83 \div 3$$

$$64.8 \div 4$$

$$0.644 \div 4$$

$$0.396 \div 6$$

$$55.8 \div 2$$

$$8.24 \div 2$$

# Real Life Math

Ken works in a sporting goods store. He has a bag of balls that weighs 1.52 kilograms. There are 8 balls in the bag. What is the weight of each ball?

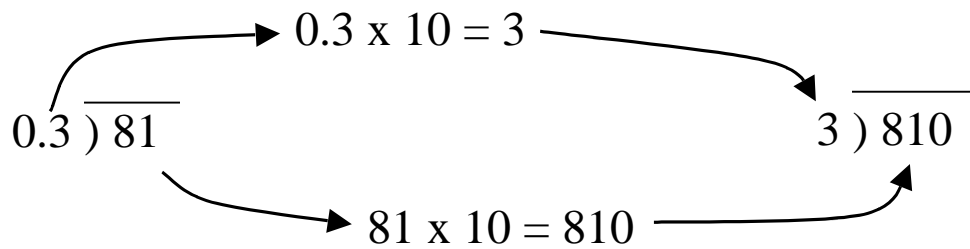


# Dividing By Decimals

**Example**       $81 \div 0.3$

## Step 1

Multiply both the divisor and the dividend by the same number so that the new divisor is a whole number.



## Step 2

Divide the new dividend from Step 1 by the new divisor from Step 1.

$$\begin{array}{r} 270 \\ 3 \overline{)810} \\ \underline{6} \phantom{0} \\ 21 \phantom{0} \\ \underline{21} \\ 0 \end{array}$$

**The final answer is 270**

## Remember



If the divisor is in the tenths place, multiply it by ten to get a whole number.

$$0.5 \times 10 = 5$$

If the divisor is in the hundredths place, multiply it by one hundred to get a whole number.

$$0.05 \times 100 = 5$$

If the divisor is in the thousandths place, multiply it by one thousand to get a whole number.

$$0.005 \times 1000 = 5$$

**Divide the numbers.**

$$42 \div 0.7$$

$$40 \div 0.8$$

$$68 \div 0.4$$

$77 \div 0.7$

$24 \div 0.6$

$86 \div 0.2$

$232 \div 0.04$

$578 \div 0.02$

$784 \div 0.04$

$309 \div 0.03$

$456 \div 0.04$

$916 \div 0.04$

$326 \div 0.02$

$610 \div 0.05$

$865 \div 0.05$

$822 \div 0.002$

$860 \div 0.005$

$432 \div 0.004$

$596 \div 0.002$

$180 \div 0.009$

$430 \div 0.005$

$500 \div 0.005$

$885 \div 0.003$

$662 \div 0.002$

# Real Life Math

Carol works for a lawn care company. At the start of the day, she puts powdered pesticide into spray containers and adds water. Carol has 36 kilograms of powder on hand. In order to get the right mixture, she must add 0.6 kilograms of powder per container. How many spray containers can Carol fill with this amount of pesticide?



# Dividing Decimals By Decimals

**Example**       $0.068 \div 0.04$

## Step 1

Multiply both the divisor and the dividend by the same number so that the new divisor is a whole number.

The diagram illustrates the conversion of the division problem  $0.04 \overline{) 0.068}$  to  $4 \overline{) 6.8}$ . It shows two equations:  $0.04 \times 100 = 4$  and  $0.068 \times 100 = 6.8$ . Arrows indicate that the divisor  $0.04$  is multiplied by 100 to become  $4$ , and the dividend  $0.068$  is multiplied by 100 to become  $6.8$ .

## Step 2

Divide the new dividend from Step 1 by the new divisor from Step 1.

$$\begin{array}{r} 1.7 \\ \hline 4 \overline{) 6.8} \\ \underline{4} \phantom{0} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

**The final answer is 1.7**

**Divide the numbers.**

$$7.5 \div 0.5$$

$$9.9 \div 0.3$$

$$1.2 \div 0.4$$

$$0.28 \div 0.7$$

$$0.54 \div 0.9$$

$$0.44 \div 0.4$$

$$78.8 \div 0.4$$

$$5.76 \div 0.3$$

$$0.939 \div 0.3$$

$$378.2 \div 0.2$$

$$94.64 \div 0.4$$

$$4.296 \div 0.3$$

$$5.5 \div 0.05$$

$$9.5 \div 0.05$$

$$1.2 \div 0.04$$

$$0.27 \div 0.09$$

$$0.77 \div 0.07$$

$$0.62 \div 0.02$$

$31.4 \div 0.02$

$1.42 \div 0.02$

$0.586 \div 0.02$

$695.4 \div 0.06$

$55.28 \div 0.04$

$9.322 \div 0.02$

$87.8 \div 0.002$

$42.5 \div 0.005$

$2.16 \div 0.003$

$1.42 \div 0.002$

$0.972 \div 0.009$

$0.875 \div 0.005$

$845.5 \div 0.005$

$545.8 \div 0.002$

$46.04 \div 0.004$

$94.84 \div 0.004$

$2.298 \div 0.006$

$0.9008 \div 0.002$

# Real Life Math

Chuck works in a factory that makes bearings. Today he is filling boxes. A box of bearings weighs 21.7 kilograms. Each bearing weighs 0.07 kilograms. How many bearings are in each box?



# Percent

The symbol % means “percent” and refers to an amount out of 100.

1% is the same as  $\frac{1}{100}$  or .01

For example,

$$24\% = 24 \times \frac{1}{100} = \frac{24}{100} \text{ or } \frac{6}{25}$$

**or**

$$24\% = 24 \times .01 = .24$$

**Convert each percent to both fraction and decimal forms.**

Percent	Fraction	Decimal
28%		
12%		
8%		
31%		
60%		

# Calculating Percentage

**Example**

31% of 642

## Step 1

Convert the percent to a decimal figure.

$$31\% = 0.31$$

## Step 2

Multiply the number by the figure found in Step 1.

$$\begin{array}{r} 642 \\ \times 0.31 \\ \hline 642 \\ 19260 \\ \hline 199.02 \end{array}$$

**The final answer is 199.02**

**Find the percentages**

$95\% \text{ of } 162 =$

$39\% \text{ of } 75 =$

$51\% \text{ of } 145 =$

$9\% \text{ of } 831 =$

$80\% \text{ of } 131 =$

$57\% \text{ of } 759 =$

$79\% \text{ of } 204 =$

$4\% \text{ of } 288 =$

$22\% \text{ of } 982 =$

$54\% \text{ of } 206 =$

$87\% \text{ of } 387 =$

$25\% \text{ of } 118 =$

$14\% \text{ of } 676 =$

$17\% \text{ of } 508 =$

$39\% \text{ of } 65.1 =$

$44\% \text{ of } 6.22 =$

$66\% \text{ of } 9.25 =$

$35\% \text{ of } 98.7 =$

$39\% \text{ of } 5.9 =$

$67\% \text{ of } 6.8 =$

# Real Life Math

Sandra works in commission sales. She is paid 7% of her sales. Sandra's sales in a week total \$3800. How much will she earn that week?



# Addendum I

## Multiplication Table

<b>X</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>0</b>	0	0	0	0	0	0	0	0	0	0
<b>1</b>	0	1	2	3	4	5	6	7	8	9
<b>2</b>	0	2	4	6	8	10	12	14	16	18
<b>3</b>	0	3	6	9	12	15	18	21	24	27
<b>4</b>	0	4	8	12	16	20	24	28	32	36
<b>5</b>	0	5	10	15	20	25	30	35	40	45
<b>6</b>	0	6	12	18	24	30	36	42	48	54
<b>7</b>	0	7	14	21	28	35	42	49	56	63
<b>8</b>	0	8	16	24	32	40	48	56	64	72
<b>9</b>	0	9	18	27	36	45	54	63	72	81

# Answer Key

Add the numbers. (Page 1)

$$\begin{array}{r} 355 \\ + 623 \\ \hline 978 \end{array}$$

$$\begin{array}{r} 881 \\ + 6 \\ \hline 887 \end{array}$$

$$\begin{array}{r} 515 \\ + 411 \\ \hline 926 \end{array}$$

$$\begin{array}{r} 271 \\ + 308 \\ \hline 579 \end{array}$$

$$\begin{array}{r} 588 \\ + 313 \\ \hline 901 \end{array}$$

$$\begin{array}{r} 658 \\ + 201 \\ \hline 859 \end{array}$$

$$\begin{array}{r} 869 \\ + 130 \\ \hline 999 \end{array}$$

$$\begin{array}{r} 358 \\ + 611 \\ \hline 969 \end{array}$$

$$\begin{array}{r} 951 \\ + 28 \\ \hline 979 \end{array}$$

$$\begin{array}{r} 617 \\ + 342 \\ \hline 959 \end{array}$$

$$\begin{array}{r} 501 \\ + 98 \\ \hline 599 \end{array}$$

$$\begin{array}{r} 531 \\ + 218 \\ \hline 749 \end{array}$$

Subtract the numbers. (Page 2)

$$\begin{array}{r} 725 \\ - 481 \\ \hline 244 \end{array}$$

$$\begin{array}{r} 658 \\ - 471 \\ \hline 187 \end{array}$$

$$\begin{array}{r} 648 \\ - 542 \\ \hline 106 \end{array}$$

$$\begin{array}{r} 948 \\ - 715 \\ \hline 233 \end{array}$$

$$\begin{array}{r} 634 \\ - 63 \\ \hline 571 \end{array}$$

$$\begin{array}{r} 558 \\ - 253 \\ \hline 305 \end{array}$$

$$\begin{array}{r} 726 \\ - 66 \\ \hline 660 \end{array}$$

$$\begin{array}{r} 834 \\ - 8 \\ \hline 826 \end{array}$$

$$\begin{array}{r} 617 \\ - 542 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 453 \\ - 374 \\ \hline 79 \end{array}$$

$$\begin{array}{r} 768 \\ - 364 \\ \hline 404 \end{array}$$

$$\begin{array}{r} 732 \\ - 378 \\ \hline 354 \end{array}$$

$$\begin{array}{r} 843 \\ - 586 \\ \hline 257 \end{array}$$

$$\begin{array}{r} 947 \\ - 871 \\ \hline 76 \end{array}$$

$$\begin{array}{r} 433 \\ - 278 \\ \hline 155 \end{array}$$

$$\begin{array}{r} 556 \\ - 374 \\ \hline 182 \end{array}$$

**Multiply the numbers.** (Pages 5-6)

$$\begin{array}{r} 6 \\ \times 9 \\ \hline 54 \end{array}$$

$$\begin{array}{r} 1 \\ \times 4 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 0 \\ \times 1 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline 49 \end{array}$$

$$\begin{array}{r} 4 \\ \times 9 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 2 \\ \times 1 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline 45 \end{array}$$

$$\begin{array}{r} 8 \\ \times 1 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 1 \\ \times 3 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 1 \\ \times 2 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 0 \\ \times 4 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 9 \\ \times 8 \\ \hline 72 \end{array}$$

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 9 \\ \times 7 \\ \hline 63 \end{array}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 7 \\ \times 0 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 6 \\ \times 8 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 1 \\ \times 5 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 1 \\ \times 8 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 8 \\ \times 2 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 2 \\ \times 0 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 1 \\ \times 7 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ \times 7 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline 35 \end{array}$$

$$\begin{array}{r} 1 \\ \times 6 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 2 \\ \times 9 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 5 \\ \times 1 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 3 \\ \times 9 \\ \hline 27 \end{array}$$

**Real Life Math** (Page 7)

Diane will send 8 shipments in 4 weeks.

54 apples would be needed to fill 9 baskets.

**Multiply the numbers. (Page 9)**

62 $\begin{array}{r} \underline{\times 1} \\ 62 \end{array}$	14 $\begin{array}{r} \underline{\times 2} \\ 28 \end{array}$	32 $\begin{array}{r} \underline{\times 4} \\ 128 \end{array}$	42 $\begin{array}{r} \underline{\times 1} \\ 42 \end{array}$	93 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$
24 $\begin{array}{r} \underline{\times 2} \\ 48 \end{array}$	13 $\begin{array}{r} \underline{\times 3} \\ 39 \end{array}$	71 $\begin{array}{r} \underline{\times 3} \\ 213 \end{array}$	28 $\begin{array}{r} \underline{\times 1} \\ 28 \end{array}$	21 $\begin{array}{r} \underline{\times 6} \\ 126 \end{array}$
83 $\begin{array}{r} \underline{\times 3} \\ 249 \end{array}$	12 $\begin{array}{r} \underline{\times 4} \\ 48 \end{array}$	41 $\begin{array}{r} \underline{\times 1} \\ 41 \end{array}$	30 $\begin{array}{r} \underline{\times 3} \\ 90 \end{array}$	83 $\begin{array}{r} \underline{\times 2} \\ 166 \end{array}$
73 $\begin{array}{r} \underline{\times 2} \\ 146 \end{array}$	23 $\begin{array}{r} \underline{\times 3} \\ 69 \end{array}$	32 $\begin{array}{r} \underline{\times 4} \\ 128 \end{array}$	22 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	52 $\begin{array}{r} \underline{\times 4} \\ 208 \end{array}$
91 $\begin{array}{r} \underline{\times 7} \\ 631 \end{array}$	62 $\begin{array}{r} \underline{\times 3} \\ 186 \end{array}$	11 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	99 $\begin{array}{r} \underline{\times 1} \\ 99 \end{array}$	42 $\begin{array}{r} \underline{\times 3} \\ 126 \end{array}$
24 $\begin{array}{r} \underline{\times 1} \\ 24 \end{array}$	15 $\begin{array}{r} \underline{\times 1} \\ 15 \end{array}$	34 $\begin{array}{r} \underline{\times 2} \\ 68 \end{array}$	41 $\begin{array}{r} \underline{\times 4} \\ 164 \end{array}$	97 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$

**Multiply the numbers. (Page 11)**

46 $\begin{array}{r} \underline{\times 2} \\ 92 \end{array}$	53 $\begin{array}{r} \underline{\times 1} \\ 53 \end{array}$	32 $\begin{array}{r} \underline{\times 3} \\ 96 \end{array}$	12 $\begin{array}{r} \underline{\times 2} \\ 24 \end{array}$	52 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$
39 $\begin{array}{r} \underline{\times 2} \\ 78 \end{array}$	15 $\begin{array}{r} \underline{\times 6} \\ 90 \end{array}$	31 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	80 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	23 $\begin{array}{r} \underline{\times 2} \\ 46 \end{array}$
14 $\begin{array}{r} \underline{\times 3} \\ 42 \end{array}$	58 $\begin{array}{r} \underline{\times 1} \\ 58 \end{array}$	26 $\begin{array}{r} \underline{\times 3} \\ 78 \end{array}$	29 $\begin{array}{r} \underline{\times 1} \\ 29 \end{array}$	83 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$
43 $\begin{array}{r} \underline{\times 2} \\ 86 \end{array}$	23 $\begin{array}{r} \underline{\times 4} \\ 92 \end{array}$	32 $\begin{array}{r} \underline{\times 3} \\ 96 \end{array}$	22 $\begin{array}{r} \underline{\times 4} \\ 88 \end{array}$	52 $\begin{array}{r} \underline{\times 1} \\ 52 \end{array}$
91 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	22 $\begin{array}{r} \underline{\times 3} \\ 66 \end{array}$	11 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$	99 $\begin{array}{r} \underline{\times 1} \\ 99 \end{array}$	42 $\begin{array}{r} \underline{\times 2} \\ 84 \end{array}$
24 $\begin{array}{r} \underline{\times 4} \\ 96 \end{array}$	15 $\begin{array}{r} \underline{\times 6} \\ 90 \end{array}$	17 $\begin{array}{r} \underline{\times 4} \\ 68 \end{array}$	41 $\begin{array}{r} \underline{\times 2} \\ 82 \end{array}$	96 $\begin{array}{r} \underline{\times 0} \\ 0 \end{array}$

**Real life Math (Page 12)**

Mark would expect to sell 75 radios in 3 weeks.

2 radios would cost \$78.

**Multiply the numbers. (Page 14)**

$$\begin{array}{r} 96 \\ \times 2 \\ \hline 192 \end{array}$$

$$\begin{array}{r} 54 \\ \times 5 \\ \hline 270 \end{array}$$

$$\begin{array}{r} 16 \\ \times 1 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 47 \\ \times 7 \\ \hline 329 \end{array}$$

$$\begin{array}{r} 11 \\ \times 2 \\ \hline 22 \end{array}$$

$$\begin{array}{r} 46 \\ \times 1 \\ \hline 46 \end{array}$$

$$\begin{array}{r} 45 \\ \times 6 \\ \hline 270 \end{array}$$

$$\begin{array}{r} 23 \\ \times 5 \\ \hline 115 \end{array}$$

$$\begin{array}{r} 24 \\ \times 9 \\ \hline 216 \end{array}$$

$$\begin{array}{r} 92 \\ \times 7 \\ \hline 644 \end{array}$$

$$\begin{array}{r} 18 \\ \times 6 \\ \hline 108 \end{array}$$

$$\begin{array}{r} 42 \\ \times 6 \\ \hline 252 \end{array}$$

$$\begin{array}{r} 64 \\ \times 8 \\ \hline 512 \end{array}$$

$$\begin{array}{r} 25 \\ \times 1 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 44 \\ \times 8 \\ \hline 352 \end{array}$$

$$\begin{array}{r} 83 \\ \times 5 \\ \hline 415 \end{array}$$

$$\begin{array}{r} 30 \\ \times 3 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 93 \\ \times 7 \\ \hline 651 \end{array}$$

$$\begin{array}{r} 47 \\ \times 6 \\ \hline 282 \end{array}$$

$$\begin{array}{r} 18 \\ \times 4 \\ \hline 72 \end{array}$$

$$\begin{array}{r} 74 \\ \times 0 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 33 \\ \times 1 \\ \hline 33 \end{array}$$

$$\begin{array}{r} 51 \\ \times 8 \\ \hline 408 \end{array}$$

$$\begin{array}{r} 10 \\ \times 6 \\ \hline 60 \end{array}$$

$$\begin{array}{r} 93 \\ \times 9 \\ \hline 837 \end{array}$$

$$\begin{array}{r} 59 \\ \times 9 \\ \hline 531 \end{array}$$

$$\begin{array}{r} 73 \\ \times 4 \\ \hline 292 \end{array}$$

$$\begin{array}{r} 14 \\ \times 2 \\ \hline 28 \end{array}$$

$$\begin{array}{r} 60 \\ \times 4 \\ \hline 240 \end{array}$$

$$\begin{array}{r} 93 \\ \times 6 \\ \hline 558 \end{array}$$

**Real Life Math (Page 15)**

Jim has 208 nails.

He should expect to use 468 nails in a week.

**Multiply the numbers.** (Pages 18-19)

303 $\begin{array}{r} \times 9 \\ \hline 2727 \end{array}$	577 $\begin{array}{r} \times 7 \\ \hline 4039 \end{array}$	576 $\begin{array}{r} \times 9 \\ \hline 5184 \end{array}$	175 $\begin{array}{r} \times 5 \\ \hline 875 \end{array}$	474 $\begin{array}{r} \times 1 \\ \hline 474 \end{array}$
870 $\begin{array}{r} \times 3 \\ \hline 2610 \end{array}$	168 $\begin{array}{r} \times 3 \\ \hline 504 \end{array}$	464 $\begin{array}{r} \times 3 \\ \hline 1392 \end{array}$	648 $\begin{array}{r} \times 7 \\ \hline 4536 \end{array}$	485 $\begin{array}{r} \times 5 \\ \hline 2425 \end{array}$
183 $\begin{array}{r} \times 1 \\ \hline 183 \end{array}$	405 $\begin{array}{r} \times 3 \\ \hline 1215 \end{array}$	104 $\begin{array}{r} \times 3 \\ \hline 312 \end{array}$	463 $\begin{array}{r} \times 0 \\ \hline 0 \end{array}$	965 $\begin{array}{r} \times 6 \\ \hline 5790 \end{array}$
617 $\begin{array}{r} \times 2 \\ \hline 1234 \end{array}$	523 $\begin{array}{r} \times 8 \\ \hline 4184 \end{array}$	572 $\begin{array}{r} \times 0 \\ \hline 0 \end{array}$	427 $\begin{array}{r} \times 6 \\ \hline 2562 \end{array}$	458 $\begin{array}{r} \times 2 \\ \hline 916 \end{array}$
976 $\begin{array}{r} \times 9 \\ \hline 8784 \end{array}$	308 $\begin{array}{r} \times 5 \\ \hline 1540 \end{array}$	905 $\begin{array}{r} \times 9 \\ \hline 8145 \end{array}$	712 $\begin{array}{r} \times 3 \\ \hline 2136 \end{array}$	338 $\begin{array}{r} \times 3 \\ \hline 1014 \end{array}$
188 $\begin{array}{r} \times 4 \\ \hline 752 \end{array}$	822 $\begin{array}{r} \times 3 \\ \hline 2466 \end{array}$	361 $\begin{array}{r} \times 7 \\ \hline 2527 \end{array}$	272 $\begin{array}{r} \times 1 \\ \hline 272 \end{array}$	255 $\begin{array}{r} \times 2 \\ \hline 510 \end{array}$
278 $\begin{array}{r} \times 2 \\ \hline 556 \end{array}$	210 $\begin{array}{r} \times 6 \\ \hline 1260 \end{array}$	926 $\begin{array}{r} \times 1 \\ \hline 926 \end{array}$	724 $\begin{array}{r} \times 7 \\ \hline 5068 \end{array}$	154 $\begin{array}{r} \times 5 \\ \hline 770 \end{array}$
738 $\begin{array}{r} \times 4 \\ \hline 2952 \end{array}$	767 $\begin{array}{r} \times 6 \\ \hline 4602 \end{array}$	920 $\begin{array}{r} \times 0 \\ \hline 0 \end{array}$	439 $\begin{array}{r} \times 5 \\ \hline 2195 \end{array}$	593 $\begin{array}{r} \times 6 \\ \hline 3558 \end{array}$
315 $\begin{array}{r} \times 1 \\ \hline 315 \end{array}$	796 $\begin{array}{r} \times 3 \\ \hline 2388 \end{array}$	693 $\begin{array}{r} \times 8 \\ \hline 5544 \end{array}$	511 $\begin{array}{r} \times 9 \\ \hline 4599 \end{array}$	749 $\begin{array}{r} \times 2 \\ \hline 1498 \end{array}$
278 $\begin{array}{r} \times 4 \\ \hline 1112 \end{array}$	662 $\begin{array}{r} \times 5 \\ \hline 3310 \end{array}$	864 $\begin{array}{r} \times 7 \\ \hline 6048 \end{array}$	771 $\begin{array}{r} \times 3 \\ \hline 2313 \end{array}$	434 $\begin{array}{r} \times 1 \\ \hline 434 \end{array}$
272 $\begin{array}{r} \times 6 \\ \hline 1632 \end{array}$	700 $\begin{array}{r} \times 4 \\ \hline 2800 \end{array}$	765 $\begin{array}{r} \times 6 \\ \hline 4590 \end{array}$	512 $\begin{array}{r} \times 2 \\ \hline 1024 \end{array}$	808 $\begin{array}{r} \times 9 \\ \hline 7272 \end{array}$
655 $\begin{array}{r} \times 4 \\ \hline 2620 \end{array}$	251 $\begin{array}{r} \times 4 \\ \hline 1004 \end{array}$	950 $\begin{array}{r} \times 7 \\ \hline 6650 \end{array}$	573 $\begin{array}{r} \times 8 \\ \hline 4584 \end{array}$	485 $\begin{array}{r} \times 8 \\ \hline 3880 \end{array}$

**Real Life Math** (Page 20)

Paul should order 4130 cartons of milk for one week.

**Multiply the numbers. (Page 22)**

$$\begin{array}{r} 34 \\ \times 22 \\ \hline 748 \end{array}$$

$$\begin{array}{r} 37 \\ \times 11 \\ \hline 407 \end{array}$$

$$\begin{array}{r} 30 \\ \times 33 \\ \hline 990 \end{array}$$

$$\begin{array}{r} 31 \\ \times 23 \\ \hline 713 \end{array}$$

$$\begin{array}{r} 43 \\ \times 21 \\ \hline 903 \end{array}$$

$$\begin{array}{r} 20 \\ \times 44 \\ \hline 880 \end{array}$$

$$\begin{array}{r} 42 \\ \times 20 \\ \hline 840 \end{array}$$

$$\begin{array}{r} 55 \\ \times 11 \\ \hline 605 \end{array}$$

$$\begin{array}{r} 43 \\ \times 22 \\ \hline 946 \end{array}$$

$$\begin{array}{r} 24 \\ \times 21 \\ \hline 504 \end{array}$$

$$\begin{array}{r} 82 \\ \times 11 \\ \hline 902 \end{array}$$

$$\begin{array}{r} 41 \\ \times 22 \\ \hline 902 \end{array}$$

$$\begin{array}{r} 24 \\ \times 12 \\ \hline 288 \end{array}$$

$$\begin{array}{r} 14 \\ \times 20 \\ \hline 280 \end{array}$$

$$\begin{array}{r} 11 \\ \times 83 \\ \hline 913 \end{array}$$

$$\begin{array}{r} 24 \\ \times 22 \\ \hline 528 \end{array}$$

$$\begin{array}{r} 32 \\ \times 32 \\ \hline 1024 \end{array}$$

$$\begin{array}{r} 13 \\ \times 33 \\ \hline 429 \end{array}$$

$$\begin{array}{r} 44 \\ \times 21 \\ \hline 924 \end{array}$$

$$\begin{array}{r} 19 \\ \times 11 \\ \hline 209 \end{array}$$

$$\begin{array}{r} 41 \\ \times 21 \\ \hline 861 \end{array}$$

$$\begin{array}{r} 29 \\ \times 11 \\ \hline 319 \end{array}$$

$$\begin{array}{r} 20 \\ \times 43 \\ \hline 860 \end{array}$$

$$\begin{array}{r} 11 \\ \times 70 \\ \hline 770 \end{array}$$

$$\begin{array}{r} 22 \\ \times 40 \\ \hline 880 \end{array}$$

$$\begin{array}{r} 11 \\ \times 39 \\ \hline 429 \end{array}$$

$$\begin{array}{r} 30 \\ \times 23 \\ \hline 690 \end{array}$$

$$\begin{array}{r} 10 \\ \times 19 \\ \hline 190 \end{array}$$

$$\begin{array}{r} 41 \\ \times 20 \\ \hline 820 \end{array}$$

$$\begin{array}{r} 31 \\ \times 32 \\ \hline 992 \end{array}$$

**Real Life Math (Page 23)**

There are 144 eggs in each box.

**Multiply the numbers.** (Pages 25-26)

91 $\begin{array}{r} \times 97 \\ \hline 8827 \end{array}$	32 $\begin{array}{r} \times 51 \\ \hline 1632 \end{array}$	53 $\begin{array}{r} \times 50 \\ \hline 2650 \end{array}$	87 $\begin{array}{r} \times 3 \\ \hline 261 \end{array}$	86 $\begin{array}{r} \times 33 \\ \hline 2838 \end{array}$
55 $\begin{array}{r} \times 0 \\ \hline 0 \end{array}$	45 $\begin{array}{r} \times 4 \\ \hline 180 \end{array}$	18 $\begin{array}{r} \times 87 \\ \hline 1566 \end{array}$	35 $\begin{array}{r} \times 9 \\ \hline 315 \end{array}$	40 $\begin{array}{r} \times 16 \\ \hline 640 \end{array}$
89 $\begin{array}{r} \times 57 \\ \hline 5073 \end{array}$	99 $\begin{array}{r} \times 41 \\ \hline 4059 \end{array}$	58 $\begin{array}{r} \times 24 \\ \hline 1392 \end{array}$	35 $\begin{array}{r} \times 65 \\ \hline 2275 \end{array}$	62 $\begin{array}{r} \times 67 \\ \hline 4154 \end{array}$
16 $\begin{array}{r} \times 92 \\ \hline 1472 \end{array}$	61 $\begin{array}{r} \times 88 \\ \hline 5368 \end{array}$	10 $\begin{array}{r} \times 34 \\ \hline 340 \end{array}$	14 $\begin{array}{r} \times 47 \\ \hline 658 \end{array}$	17 $\begin{array}{r} \times 72 \\ \hline 1224 \end{array}$
55 $\begin{array}{r} \times 7 \\ \hline 385 \end{array}$	69 $\begin{array}{r} \times 83 \\ \hline 5727 \end{array}$	58 $\begin{array}{r} \times 1 \\ \hline 58 \end{array}$	44 $\begin{array}{r} \times 6 \\ \hline 264 \end{array}$	63 $\begin{array}{r} \times 10 \\ \hline 630 \end{array}$
26 $\begin{array}{r} \times 92 \\ \hline 2392 \end{array}$	57 $\begin{array}{r} \times 96 \\ \hline 5472 \end{array}$	84 $\begin{array}{r} \times 5 \\ \hline 420 \end{array}$	21 $\begin{array}{r} \times 83 \\ \hline 1743 \end{array}$	70 $\begin{array}{r} \times 10 \\ \hline 700 \end{array}$
78 $\begin{array}{r} \times 23 \\ \hline 1794 \end{array}$	93 $\begin{array}{r} \times 6 \\ \hline 558 \end{array}$	62 $\begin{array}{r} \times 66 \\ \hline 4092 \end{array}$	35 $\begin{array}{r} \times 38 \\ \hline 1330 \end{array}$	43 $\begin{array}{r} \times 66 \\ \hline 2838 \end{array}$
10 $\begin{array}{r} \times 47 \\ \hline 470 \end{array}$	80 $\begin{array}{r} \times 78 \\ \hline 6240 \end{array}$	85 $\begin{array}{r} \times 4 \\ \hline 340 \end{array}$	75 $\begin{array}{r} \times 99 \\ \hline 7425 \end{array}$	80 $\begin{array}{r} \times 20 \\ \hline 1600 \end{array}$
89 $\begin{array}{r} \times 67 \\ \hline 5963 \end{array}$	91 $\begin{array}{r} \times 96 \\ \hline 8736 \end{array}$	42 $\begin{array}{r} \times 8 \\ \hline 336 \end{array}$	54 $\begin{array}{r} \times 95 \\ \hline 5130 \end{array}$	56 $\begin{array}{r} \times 48 \\ \hline 2688 \end{array}$
25 $\begin{array}{r} \times 14 \\ \hline 350 \end{array}$	59 $\begin{array}{r} \times 9 \\ \hline 531 \end{array}$	83 $\begin{array}{r} \times 52 \\ \hline 4316 \end{array}$	63 $\begin{array}{r} \times 65 \\ \hline 4095 \end{array}$	23 $\begin{array}{r} \times 16 \\ \hline 368 \end{array}$
79 $\begin{array}{r} \times 11 \\ \hline 869 \end{array}$	63 $\begin{array}{r} \times 51 \\ \hline 3213 \end{array}$	18 $\begin{array}{r} \times 26 \\ \hline 468 \end{array}$	26 $\begin{array}{r} \times 65 \\ \hline 1690 \end{array}$	84 $\begin{array}{r} \times 89 \\ \hline 7476 \end{array}$
54 $\begin{array}{r} \times 81 \\ \hline 4374 \end{array}$	31 $\begin{array}{r} \times 32 \\ \hline 992 \end{array}$	61 $\begin{array}{r} \times 57 \\ \hline 3477 \end{array}$	93 $\begin{array}{r} \times 0 \\ \hline 0 \end{array}$	91 $\begin{array}{r} \times 40 \\ \hline 3640 \end{array}$

**Real Life Math** (Page 27)

Jean will type 795 words in 15 minutes.

**Multiply the numbers. (Pages 29-30)**

102 <u>x 53</u> 5406	155 <u>x 4</u> 620	572 <u>x 89</u> 50908	889 <u>x 23</u> 20447	384 <u>x 79</u> 30336
280 <u>x 13</u> 3640	194 <u>x 95</u> 18430	811 <u>x 6</u> 4866	308 <u>x 72</u> 22176	219 <u>x 52</u> 11388
544 <u>x 0</u> 0	725 <u>x 28</u> 20300	774 <u>x 9</u> 6966	363 <u>x 66</u> 23958	941 <u>x 32</u> 30112
249 <u>x 33</u> 8217	533 <u>x 27</u> 14391	294 <u>x 20</u> 5880	495 <u>x 49</u> 24255	446 <u>x 7</u> 3122
750 <u>x 70</u> 52500	909 <u>x 25</u> 22725	249 <u>x 46</u> 11454	339 <u>x 25</u> 8475	676 <u>x 77</u> 52052
485 <u>x 75</u> 36375	296 <u>x 85</u> 25160	233 <u>x 34</u> 7922	312 <u>x 40</u> 12480	589 <u>x 78</u> 45942
809 <u>x 46</u> 37214	874 <u>x 19</u> 16606	694 <u>x 97</u> 67318	987 <u>x 71</u> 70077	137 <u>x 61</u> 8357
287 <u>x 43</u> 12341	776 <u>x 98</u> 76048	206 <u>x 33</u> 6798	243 <u>x 90</u> 21870	337 <u>x 11</u> 3707
848 <u>x 52</u> 44096	639 <u>x 88</u> 56232	591 <u>x 34</u> 20094	938 <u>x 54</u> 50652	636 <u>x 34</u> 21624
710 <u>x 45</u> 31950	386 <u>x 64</u> 24704	723 <u>x 54</u> 39042	828 <u>x 18</u> 14904	250 <u>x 24</u> 6000
914 <u>x 51</u> 46614	768 <u>x 46</u> 35328	600 <u>x 32</u> 19200	291 <u>x 96</u> 27936	448 <u>x 28</u> 12544
848 <u>x 5</u> 4240	417 <u>x 84</u> 35028	580 <u>x 51</u> 29580	536 <u>x 61</u> 32696	948 <u>x 32</u> 30336

**Real Life Math (Page 31)**

Carla should plan to sell 6375 magazines in 25 days.

**Multiply the numbers.** (Pages 33-34)

$\begin{array}{r} 490 \\ \times 171 \\ \hline 83790 \end{array}$	$\begin{array}{r} 131 \\ \times 39 \\ \hline 5109 \end{array}$	$\begin{array}{r} 117 \\ \times 634 \\ \hline 74178 \end{array}$	$\begin{array}{r} 435 \\ \times 997 \\ \hline 433695 \end{array}$	$\begin{array}{r} 166 \\ \times 7 \\ \hline 1162 \end{array}$
$\begin{array}{r} 100 \\ \times 862 \\ \hline 86200 \end{array}$	$\begin{array}{r} 884 \\ \times 589 \\ \hline 520676 \end{array}$	$\begin{array}{r} 108 \\ \times 512 \\ \hline 55296 \end{array}$	$\begin{array}{r} 645 \\ \times 788 \\ \hline 508260 \end{array}$	$\begin{array}{r} 143 \\ \times 135 \\ \hline 19305 \end{array}$
$\begin{array}{r} 403 \\ \times 308 \\ \hline 124124 \end{array}$	$\begin{array}{r} 298 \\ \times 488 \\ \hline 145424 \end{array}$	$\begin{array}{r} 308 \\ \times 965 \\ \hline 297220 \end{array}$	$\begin{array}{r} 934 \\ \times 271 \\ \hline 253114 \end{array}$	$\begin{array}{r} 762 \\ \times 889 \\ \hline 677418 \end{array}$
$\begin{array}{r} 227 \\ \times 301 \\ \hline 68327 \end{array}$	$\begin{array}{r} 281 \\ \times 86 \\ \hline 24166 \end{array}$	$\begin{array}{r} 893 \\ \times 555 \\ \hline 495615 \end{array}$	$\begin{array}{r} 646 \\ \times 588 \\ \hline 379848 \end{array}$	$\begin{array}{r} 598 \\ \times 401 \\ \hline 239798 \end{array}$
$\begin{array}{r} 673 \\ \times 441 \\ \hline 296793 \end{array}$	$\begin{array}{r} 717 \\ \times 94 \\ \hline 67398 \end{array}$	$\begin{array}{r} 743 \\ \times 104 \\ \hline 77272 \end{array}$	$\begin{array}{r} 574 \\ \times 170 \\ \hline 97580 \end{array}$	$\begin{array}{r} 671 \\ \times 713 \\ \hline 478423 \end{array}$
$\begin{array}{r} 573 \\ \times 604 \\ \hline 346092 \end{array}$	$\begin{array}{r} 809 \\ \times 517 \\ \hline 418253 \end{array}$	$\begin{array}{r} 909 \\ \times 281 \\ \hline 255429 \end{array}$	$\begin{array}{r} 250 \\ \times 919 \\ \hline 229750 \end{array}$	$\begin{array}{r} 376 \\ \times 86 \\ \hline 32336 \end{array}$
$\begin{array}{r} 544 \\ \times 690 \\ \hline 375360 \end{array}$	$\begin{array}{r} 844 \\ \times 686 \\ \hline 578984 \end{array}$	$\begin{array}{r} 205 \\ \times 578 \\ \hline 118490 \end{array}$	$\begin{array}{r} 584 \\ \times 68 \\ \hline 39712 \end{array}$	$\begin{array}{r} 270 \\ \times 386 \\ \hline 104220 \end{array}$
$\begin{array}{r} 637 \\ \times 52 \\ \hline 33124 \end{array}$	$\begin{array}{r} 408 \\ \times 533 \\ \hline 217464 \end{array}$	$\begin{array}{r} 460 \\ \times 84 \\ \hline 38640 \end{array}$	$\begin{array}{r} 858 \\ \times 287 \\ \hline 246246 \end{array}$	$\begin{array}{r} 466 \\ \times 47 \\ \hline 21902 \end{array}$
$\begin{array}{r} 241 \\ \times 506 \\ \hline 121946 \end{array}$	$\begin{array}{r} 888 \\ \times 825 \\ \hline 732600 \end{array}$	$\begin{array}{r} 924 \\ \times 532 \\ \hline 491568 \end{array}$	$\begin{array}{r} 653 \\ \times 477 \\ \hline 311481 \end{array}$	$\begin{array}{r} 788 \\ \times 644 \\ \hline 507472 \end{array}$
$\begin{array}{r} 572 \\ \times 356 \\ \hline 203632 \end{array}$	$\begin{array}{r} 835 \\ \times 682 \\ \hline 569470 \end{array}$	$\begin{array}{r} 579 \\ \times 20 \\ \hline 11580 \end{array}$	$\begin{array}{r} 531 \\ \times 269 \\ \hline 142839 \end{array}$	$\begin{array}{r} 306 \\ \times 429 \\ \hline 131274 \end{array}$
$\begin{array}{r} 844 \\ \times 218 \\ \hline 183992 \end{array}$	$\begin{array}{r} 655 \\ \times 499 \\ \hline 326845 \end{array}$	$\begin{array}{r} 138 \\ \times 761 \\ \hline 105018 \end{array}$	$\begin{array}{r} 397 \\ \times 930 \\ \hline 369210 \end{array}$	$\begin{array}{r} 152 \\ \times 603 \\ \hline 91656 \end{array}$
$\begin{array}{r} 541 \\ \times 714 \\ \hline 386274 \end{array}$	$\begin{array}{r} 905 \\ \times 776 \\ \hline 702280 \end{array}$	$\begin{array}{r} 989 \\ \times 533 \\ \hline 527137 \end{array}$	$\begin{array}{r} 624 \\ \times 11 \\ \hline 6864 \end{array}$	$\begin{array}{r} 605 \\ \times 904 \\ \hline 546920 \end{array}$

**Real Life Math** (Page 35)

Kelly should expect to produce 258,125 shirts in a year.

**Divide (Page 37)**

$7 \div 1 = 7$

$9 \div 3 = 3$

$6 \div 2 = 3$

$2 \div 1 = 2$

$4 \div 2 = 2$

$6 \div 3 = 2$

$8 \div 4 = 2$

$8 \div 2 = 4$

$$\begin{array}{r} 2 \\ 4 \overline{) 8} \end{array}$$

$$\begin{array}{r} 2 \\ 3 \overline{) 6} \end{array}$$

$$\begin{array}{r} 4 \\ 2 \overline{) 8} \end{array}$$

$$\begin{array}{r} 2 \\ 2 \overline{) 4} \end{array}$$

$$\begin{array}{r} 2 \\ 1 \overline{) 2} \end{array}$$

$$\begin{array}{r} 3 \\ 2 \overline{) 6} \end{array}$$

$$\begin{array}{r} 7 \\ 1 \overline{) 7} \end{array}$$

$$\begin{array}{r} 3 \\ 3 \overline{) 9} \end{array}$$

**Real Life Math (Page 38)**

Jerry is waiting on 4 tables.

**Divide (Pages 40-41)**

$56 \div 7 = 8$

$28 \div 4 = 7$

$21 \div 3 = 7$

$35 \div 5 = 7$

$27 \div 9 = 3$

$45 \div 5 = 9$

$30 \div 6 = 5$

$45 \div 9 = 5$

$$\begin{array}{r} 8 \\ 7 \overline{) 56} \end{array}$$

$$\begin{array}{r} 7 \\ 4 \overline{) 28} \end{array}$$

$$\begin{array}{r} 7 \\ 3 \overline{) 21} \end{array}$$

$$\begin{array}{r} 7 \\ 5 \overline{) 35} \end{array}$$

$$\begin{array}{r} 3 \\ 9 \overline{) 27} \end{array}$$

$$\begin{array}{r} 9 \\ 5 \overline{) 45} \end{array}$$

$$\begin{array}{r} 5 \\ 6 \overline{) 30} \end{array}$$

$$\begin{array}{r} 5 \\ 9 \overline{) 45} \end{array}$$

$$\begin{array}{r} 6 \\ 5 \overline{) 30} \end{array}$$

$$\begin{array}{r} 2 \\ 3 \overline{) 6} \end{array}$$

$$\begin{array}{r} 2 \\ 2 \overline{) 4} \end{array}$$

$$\begin{array}{r} 6 \\ 7 \overline{) 42} \end{array}$$

$$\begin{array}{r} 8 \\ 6 \overline{) 48} \end{array}$$

$$\begin{array}{r} 0 \\ 0 \overline{) 79} \end{array}$$

$$\begin{array}{r} 4 \\ 7 \overline{) 28} \end{array}$$

$$\begin{array}{r} 7 \\ 6 \overline{) 42} \end{array}$$

$$\begin{array}{r} 5 \\ 5 \overline{) 25} \end{array}$$

$$\begin{array}{r} 9 \\ 3 \overline{) 27} \end{array}$$

$$\begin{array}{r} 4 \\ 4 \overline{) 16} \end{array}$$

$$\begin{array}{r} 3 \\ 7 \overline{) 21} \end{array}$$

$$\begin{array}{r} 6 \\ 6 \overline{) 36} \end{array}$$

$$\begin{array}{r} 8 \\ 5 \overline{) 40} \end{array}$$

$$\begin{array}{r} 7 \\ 7 \overline{) 49} \end{array}$$

$$\begin{array}{r} 6 \\ 3 \overline{) 18} \end{array}$$

$$\begin{array}{r} 8 \\ 8 \overline{) 64} \end{array}$$

$$\begin{array}{r} 5 \\ 3 \overline{) 15} \end{array}$$

$$\begin{array}{r} 9 \\ 9 \overline{) 81} \end{array}$$

$$\begin{array}{r} 4 \\ 9 \overline{) 36} \end{array}$$

$$\begin{array}{r} 5 \\ 3 \overline{) 15} \end{array}$$

$$\begin{array}{r} 9 \\ 6 \overline{) 54} \end{array}$$

$$\begin{array}{r} 4 \\ 3 \overline{) 12} \end{array}$$

$$\begin{array}{r} 5 \\ 2 \overline{) 10} \end{array}$$

$$\begin{array}{r} 4 \\ 8 \overline{) 32} \end{array}$$

$$\begin{array}{r} 3 \\ 2 \overline{) 6} \end{array}$$

$$\begin{array}{r} 7 \\ 2 \overline{) 14} \end{array}$$

$$\begin{array}{r} 0 \\ 0 \overline{) 42} \end{array}$$

**Real Life Math (Page 43)**

Leo needs to buy 4 packages of paper towels.

He will need to buy 6 packages of paper towels to get 24 rolls.

**Divide (Page 45)**

$$\begin{array}{r} 24 \\ 2 \overline{) 48} \end{array}$$

$$\begin{array}{r} 18 \\ 3 \overline{) 54} \end{array}$$

$$\begin{array}{r} 4 \\ 8 \overline{) 32} \end{array}$$

$$\begin{array}{r} 11 \\ 4 \overline{) 44} \end{array}$$

$$\begin{array}{r} 47 \\ 2 \overline{) 94} \end{array}$$

$$\begin{array}{r} 25 \\ 3 \overline{) 75} \end{array}$$

$$\begin{array}{r} 0 \\ 0 \overline{) 37} \end{array}$$

$$\begin{array}{r} 10 \\ 7 \overline{) 70} \end{array}$$

$$\begin{array}{r} 13 \\ 4 \overline{) 52} \end{array}$$

$$\begin{array}{r} 19 \\ 2 \overline{) 38} \end{array}$$

$$\begin{array}{r} 11 \\ 8 \overline{) 88} \end{array}$$

$$\begin{array}{r} 3 \\ 7 \overline{) 21} \end{array}$$

$$\begin{array}{r} 6 \\ 3 \overline{) 18} \end{array}$$

$$\begin{array}{r} 18 \\ 5 \overline{) 90} \end{array}$$

$$\begin{array}{r} 11 \\ 6 \overline{) 66} \end{array}$$

$$\begin{array}{r} 4 \\ 8 \overline{) 32} \end{array}$$

$$\begin{array}{r} 10 \\ 5 \overline{) 50} \end{array}$$

$$\begin{array}{r} 5 \\ 4 \overline{) 20} \end{array}$$

$$\begin{array}{r} 47 \\ 1 \overline{) 47} \end{array}$$

$$\begin{array}{r} 13 \\ 2 \overline{) 26} \end{array}$$

$$\begin{array}{r} 19 \\ 4 \overline{) 76} \end{array}$$

$$\begin{array}{r} 5 \\ 5 \overline{) 25} \end{array}$$

$$\begin{array}{r} 2 \\ 9 \overline{) 18} \end{array}$$

$$\begin{array}{r} 19 \\ 5 \overline{) 95} \end{array}$$

**Real Life Math (Page 46)**

There are 9 parking spaces per row.

**Divide (Pages 48-49)**

$$\begin{array}{r} 7 \text{ r}3 \\ 5 \overline{) 38} \end{array}$$

$$\begin{array}{r} 3 \text{ r}2 \\ 4 \overline{) 14} \end{array}$$

$$\begin{array}{r} 3 \text{ r}2 \\ 6 \overline{) 20} \end{array}$$

$$\begin{array}{r} 8 \text{ r}1 \\ 4 \overline{) 33} \end{array}$$

$$\begin{array}{r} 3 \text{ r}2 \\ 3 \overline{) 11} \end{array}$$

$$\begin{array}{r} 6 \text{ r}1 \\ 2 \overline{) 13} \end{array}$$

$$\begin{array}{r} 5 \text{ r}2 \\ 5 \overline{) 27} \end{array}$$

$$\begin{array}{r} 7 \text{ r}3 \\ 7 \overline{) 52} \end{array}$$

$$\begin{array}{r} 8 \text{ r}1 \\ 2 \overline{) 17} \end{array}$$

$$\begin{array}{r} 6 \text{ r}6 \\ 8 \overline{) 54} \end{array}$$

$$\begin{array}{r} 9 \text{ r}3 \\ 5 \overline{) 48} \end{array}$$

$$\begin{array}{r} 6 \text{ r}1 \\ 5 \overline{) 31} \end{array}$$

$$\begin{array}{r} 4 \text{ r}3 \\ 5 \overline{) 23} \end{array}$$

$$\begin{array}{r} 9 \text{ r}7 \\ 8 \overline{) 79} \end{array}$$

$$\begin{array}{r} 9 \text{ r}2 \\ 8 \overline{) 74} \end{array}$$

$$\begin{array}{r} 5 \text{ r}3 \\ 4 \overline{) 23} \end{array}$$

$$\begin{array}{r} 9 \text{ r}8 \\ 9 \overline{) 89} \end{array}$$

$$\begin{array}{r} 8 \text{ r}2 \\ 6 \overline{) 50} \end{array}$$

$$\begin{array}{r} 9 \text{ r}2 \\ 6 \overline{) 56} \end{array}$$

$$\begin{array}{r} 8 \text{ r}1 \\ 3 \overline{) 25} \end{array}$$

$$\begin{array}{r} 3 \text{ r}1 \\ 3 \overline{) 10} \end{array}$$

$$\begin{array}{r} 5 \text{ r}1 \\ 3 \overline{) 16} \end{array}$$

$$\begin{array}{r} 7 \text{ r}1 \\ 6 \overline{) 43} \end{array}$$

$$\begin{array}{r} 7 \text{ r}2 \\ 4 \overline{) 30} \end{array}$$

$$\begin{array}{r} 9 \text{ r}6 \\ 7 \overline{) 69} \end{array}$$

$$\begin{array}{r} 6 \text{ r}3 \\ 6 \overline{) 39} \end{array}$$

$$\begin{array}{r} 8 \text{ r}3 \\ 5 \overline{) 43} \end{array}$$

$$\begin{array}{r} 9 \text{ r}4 \\ 6 \overline{) 58} \end{array}$$

$$\begin{array}{r} 2 \text{ r}3 \\ 6 \overline{) 15} \end{array}$$

$$\begin{array}{r} 8 \text{ r}6 \\ 8 \overline{) 70} \end{array}$$

$$\begin{array}{r} 9 \text{ r}1 \\ 2 \overline{) 19} \end{array}$$

$$\begin{array}{r} 8 \text{ r}4 \\ 8 \overline{) 68} \end{array}$$

$$\begin{array}{r} 7 \text{ r}6 \\ 8 \overline{) 62} \end{array}$$

$$\begin{array}{r} 6 \text{ r}3 \\ 4 \overline{) 27} \end{array}$$

$$\begin{array}{r} 7 \text{ r}2 \\ 6 \overline{) 44} \end{array}$$

$$\begin{array}{r} 7 \text{ r}1 \\ 4 \overline{) 29} \end{array}$$

$$\begin{array}{r} 3 \text{ r}3 \\ 6 \overline{) 21} \end{array}$$

$$\begin{array}{r} 7 \text{ r}4 \\ 5 \overline{) 39} \end{array}$$

$$\begin{array}{r} 2 \text{ r}4 \\ 5 \overline{) 14} \end{array}$$

$$\begin{array}{r} 6 \text{ r}1 \\ 7 \overline{) 43} \end{array}$$

**Real Life Math (Page 50)**

John can cut three 8-metre lengths of wire from this spool?

6 metres of wire will be left over?

**Divide (Page 52)**

$$\begin{array}{r} 3 \text{ r}12 \\ 20 \overline{) 72} \end{array}$$

$$\begin{array}{r} 3 \text{ r}12 \\ 25 \overline{) 87} \end{array}$$

$$\begin{array}{r} 4 \text{ r}14 \\ 20 \overline{) 94} \end{array}$$

$$\begin{array}{r} 2 \\ 20 \overline{) 40} \end{array}$$

$$\begin{array}{r} 6 \text{ r}1 \\ 14 \overline{) 85} \end{array}$$

$$\begin{array}{r} 2 \text{ r}23 \\ 26 \overline{) 75} \end{array}$$

$$\begin{array}{r} 3 \text{ r}12 \\ 24 \overline{) 84} \end{array}$$

$$\begin{array}{r} 2 \text{ r}19 \\ 33 \overline{) 85} \end{array}$$

$$\begin{array}{r} 2 \text{ r}31 \\ 32 \overline{) 95} \end{array}$$

$$\begin{array}{r} 2 \text{ r}17 \\ 36 \overline{) 89} \end{array}$$

$$\begin{array}{r} 8 \text{ r}8 \\ 10 \overline{) 88} \end{array}$$

$$\begin{array}{r} 3 \text{ r}4 \\ 15 \overline{) 49} \end{array}$$

$$\begin{array}{r} 1 \text{ r}34 \\ 61 \overline{) 95} \end{array}$$

$$\begin{array}{r} 2 \text{ r}2 \\ 36 \overline{) 74} \end{array}$$

$$\begin{array}{r} 2 \text{ r}19 \\ 24 \overline{) 67} \end{array}$$

$$\begin{array}{r} 4 \text{ r}10 \\ 13 \overline{) 62} \end{array}$$

$$\begin{array}{r} 4 \text{ r}6 \\ 11 \overline{) 50} \end{array}$$

$$\begin{array}{r} 1 \text{ r}6 \\ 14 \overline{) 20} \end{array}$$

$$\begin{array}{r} 3 \text{ r}14 \\ 16 \overline{) 62} \end{array}$$

$$\begin{array}{r} 2 \text{ r}4 \\ 46 \overline{) 96} \end{array}$$

$$\begin{array}{r} 4 \text{ r}7 \\ 12 \overline{) 55} \end{array}$$

$$\begin{array}{r} 6 \text{ r}3 \\ 10 \overline{) 63} \end{array}$$

$$\begin{array}{r} 1 \text{ r}4 \\ 14 \overline{) 18} \end{array}$$

$$\begin{array}{r} 2 \text{ r}31 \\ 32 \overline{) 95} \end{array}$$

**Real Life Math (Page 53)**

Each employee will clean 6 rooms.

There will be 1 room left over for Roy to take care of himself.

**Divide (Pages 56-57)**

$$\begin{array}{r} 352 \text{ r}1 \\ 2 \overline{) 705} \end{array}$$

$$\begin{array}{r} 102 \text{ r}2 \\ 5 \overline{) 512} \end{array}$$

$$\begin{array}{r} 100 \text{ r}3 \\ 8 \overline{) 803} \end{array}$$

$$\begin{array}{r} 126 \\ 4 \overline{) 504} \end{array}$$

$$\begin{array}{r} 110 \text{ r}2 \\ 3 \overline{) 332} \end{array}$$

$$\begin{array}{r} 105 \text{ r}2 \\ 9 \overline{) 947} \end{array}$$

$$\begin{array}{r} 0 \\ 0 \overline{) 529} \end{array}$$

$$\begin{array}{r} 281 \text{ r}1 \\ 2 \overline{) 563} \end{array}$$

$$\begin{array}{r} 119 \text{ r}1 \\ 7 \overline{) 834} \end{array}$$

$$\begin{array}{r} 179 \text{ r}1 \\ 2 \overline{) 359} \end{array}$$

$$\begin{array}{r} 270 \\ 2 \overline{) 540} \end{array}$$

$$\begin{array}{r} 187 \text{ r}1 \\ 2 \overline{) 375} \end{array}$$

$$\begin{array}{r} 176 \text{ r}2 \\ 3 \overline{) 530} \end{array}$$

$$\begin{array}{r} 143 \\ 1 \overline{) 143} \end{array}$$

$$\begin{array}{r} 127 \text{ r}2 \\ 6 \overline{) 764} \end{array}$$

$$\begin{array}{r} 103 \text{ r}5 \\ 6 \overline{) 623} \end{array}$$

$$\begin{array}{r} 115 \text{ r}2 \\ 4 \overline{) 462} \end{array}$$

$$\begin{array}{r} 158 \text{ r}2 \\ 3 \overline{) 476} \end{array}$$

$$\begin{array}{r} 119 \\ 4 \overline{) 476} \end{array}$$

$$\begin{array}{r} 106 \text{ r}4 \\ 6 \overline{) 640} \end{array}$$

$$\begin{array}{r} 100 \text{ r}4 \\ 6 \overline{) 604} \end{array}$$

$$\begin{array}{r} 101 \\ 8 \overline{) 808} \end{array}$$

$$\begin{array}{r} 121 \text{ r}6 \\ 7 \overline{) 853} \end{array}$$

$$\begin{array}{r} 111 \\ 4 \overline{) 444} \end{array}$$

$$\begin{array}{r} 107 \text{ r1} \\ 7 \overline{)750} \end{array}$$

$$\begin{array}{r} 103 \text{ r2} \\ 5 \overline{)517} \end{array}$$

$$\begin{array}{r} 147 \text{ r5} \\ 6 \overline{)887} \end{array}$$

$$\begin{array}{r} 158 \\ 1 \overline{)158} \end{array}$$

$$\begin{array}{r} 118 \text{ r3} \\ 6 \overline{)711} \end{array}$$

$$\begin{array}{r} 95 \text{ r1} \\ 5 \overline{)476} \end{array}$$

$$\begin{array}{r} 104 \text{ r2} \\ 3 \overline{)314} \end{array}$$

$$\begin{array}{r} 123 \text{ r3} \\ 7 \overline{)864} \end{array}$$

$$\begin{array}{r} 141 \text{ r2} \\ 3 \overline{)425} \end{array}$$

$$\begin{array}{r} 111 \text{ r4} \\ 6 \overline{)670} \end{array}$$

$$\begin{array}{r} 121 \\ 3 \overline{)363} \end{array}$$

$$\begin{array}{r} 110 \text{ r6} \\ 8 \overline{)886} \end{array}$$

$$\begin{array}{r} 127 \text{ r3} \\ 7 \overline{)892} \end{array}$$

$$\begin{array}{r} 107 \\ 9 \overline{)963} \end{array}$$

$$\begin{array}{r} 107 \text{ r4} \\ 6 \overline{)646} \end{array}$$

$$\begin{array}{r} 129 \text{ r1} \\ 3 \overline{)388} \end{array}$$

$$\begin{array}{r} 157 \text{ r2} \\ 4 \overline{)630} \end{array}$$

$$\begin{array}{r} 105 \text{ r1} \\ 5 \overline{)526} \end{array}$$

$$\begin{array}{r} 0 \\ 0 \overline{)506} \end{array}$$

$$\begin{array}{r} 185 \\ 2 \overline{)370} \end{array}$$

$$\begin{array}{r} 105 \text{ r5} \\ 6 \overline{)635} \end{array}$$

$$\begin{array}{r} 148 \text{ r1} \\ 3 \overline{)445} \end{array}$$

$$\begin{array}{r} 116 \text{ r1} \\ 4 \overline{)465} \end{array}$$

$$\begin{array}{r} 243 \text{ r1} \\ 2 \overline{)487} \end{array}$$

**Real Life Math (Page 58)**

There will be 101 loads of laundry.

6 sheets will be left over to make up a partial load.

**Divide (Page 60)**

$$\begin{array}{r} 28 \text{ r5} \\ 33 \overline{)929} \end{array}$$

$$\begin{array}{r} 12 \text{ r7} \\ 29 \overline{)355} \end{array}$$

$$\begin{array}{r} 15 \text{ r9} \\ 45 \overline{)684} \end{array}$$

$$\begin{array}{r} 17 \\ 51 \overline{)867} \end{array}$$

$$\begin{array}{r} 10 \text{ r12} \\ 45 \overline{)462} \end{array}$$

$$\begin{array}{r} 10 \text{ r11} \\ 82 \overline{)831} \end{array}$$

$$\begin{array}{r} 13 \text{ r42} \\ 49 \overline{)679} \end{array}$$

$$\begin{array}{r} 12 \text{ r31} \\ 47 \overline{)595} \end{array}$$

$$\begin{array}{r} 10 \text{ r74} \\ 92 \overline{)994} \end{array}$$

$$\begin{array}{r} 11 \text{ r15} \\ 60 \overline{)675} \end{array}$$

$$\begin{array}{r} 13 \text{ r11} \\ 35 \overline{)466} \end{array}$$

$$\begin{array}{r} 14 \text{ r20} \\ 50 \overline{)720} \end{array}$$

$$\begin{array}{r} 18 \text{ r11} \\ 14 \overline{)263} \end{array}$$

$$\begin{array}{r} 11 \text{ r1} \\ 78 \overline{)859} \end{array}$$

$$\begin{array}{r} 11 \text{ r4} \\ 83 \overline{)917} \end{array}$$

$$\begin{array}{r} 10 \text{ r36} \\ 84 \overline{)876} \end{array}$$

$$\begin{array}{r} 12 \text{ r19} \\ 52 \overline{)643} \end{array}$$

$$\begin{array}{r} 11 \text{ r53} \\ 82 \overline{)955} \end{array}$$

**Real Life Math (Page 61)**

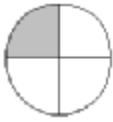
Scott will drop 30 cases of oil at each station.

9 cases of oil will be left over.

(Pages 63-64)

Write a fraction below each figure that shows how much of the figure is shaded.

Write another fraction below each figure that shows how much of the figure is not shaded.



$$\frac{1}{4}$$

$$\frac{3}{4}$$



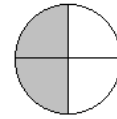
$$\frac{2}{5}$$

$$\frac{3}{5}$$



$$\frac{1}{3}$$

$$\frac{2}{3}$$



$$\frac{2}{4}$$

$$\frac{2}{4}$$



$$\frac{5}{6}$$

$$\frac{1}{6}$$



$$\frac{7}{10}$$

$$\frac{3}{10}$$



$$\frac{2}{6}$$

$$\frac{4}{6}$$



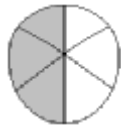
$$\frac{3}{5}$$

$$\frac{2}{5}$$



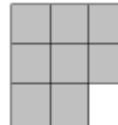
$$\frac{7}{8}$$

$$\frac{1}{8}$$



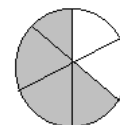
$$\frac{3}{6}$$

$$\frac{3}{6}$$



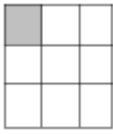
$$\frac{8}{9}$$

$$\frac{1}{9}$$



$$\frac{4}{6}$$

$$\frac{2}{6}$$



$$\frac{1}{9}$$



$$\frac{2}{3}$$



$$\frac{1}{2}$$



$$\frac{4}{5}$$

$$\frac{8}{9}$$

$$\frac{1}{3}$$

$$\frac{1}{2}$$

$$\frac{1}{5}$$



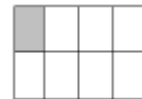
$$\frac{6}{10}$$



$$\frac{1}{5}$$



$$\frac{1}{6}$$



$$\frac{1}{8}$$

$$\frac{4}{10}$$

$$\frac{4}{5}$$

$$\frac{5}{6}$$

$$\frac{7}{8}$$

Write a fraction for each of the following. (Page 65)

eight ninths

$$\frac{8}{9}$$

three eights

$$\frac{3}{8}$$

one third

$$\frac{1}{3}$$

five ninths

$$\frac{5}{9}$$

two sevenths

$$\frac{2}{7}$$

one quarter

$$\frac{1}{4}$$

two thirds

$$\frac{2}{3}$$

five eighths

$$\frac{5}{8}$$

nine tenths

$$\frac{9}{10}$$

one sixth

$$\frac{1}{6}$$

one half

$$\frac{1}{2}$$

four fifths

$$\frac{4}{5}$$

Shade or colour each picture to reflect the fraction. (Pages 65-66)

$$\frac{1}{8}$$

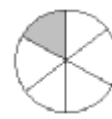
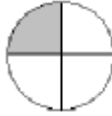


$$\frac{4}{5}$$



$$\frac{4}{6}$$



$\frac{3}{5}$  $\frac{2}{4}$  $\frac{1}{6}$  $\frac{1}{2}$  $\frac{1}{3}$  $\frac{8}{9}$  $\frac{3}{10}$  $\frac{1}{4}$  $\frac{5}{6}$ 

Convert each fraction to its simplest form. (Page 68)

$\frac{2}{4} \rightarrow \frac{1}{2}$

$\frac{24}{88} \rightarrow \frac{3}{11}$

$\frac{23}{46} \rightarrow \frac{1}{2}$

$\frac{9}{54} \rightarrow \frac{1}{6}$

$\frac{7}{14} \rightarrow \frac{1}{2}$

$\frac{27}{81} \rightarrow \frac{1}{3}$

$\frac{6}{18} \rightarrow \frac{1}{3}$

$\frac{2}{26} \rightarrow \frac{1}{13}$

$\frac{4}{68} \rightarrow \frac{1}{17}$

$\frac{40}{72} \rightarrow \frac{5}{9}$

$\frac{30}{50} \rightarrow \frac{3}{5}$

$\frac{66}{99} \rightarrow \frac{2}{3}$

$\frac{12}{30} \rightarrow \frac{2}{5}$

$\frac{6}{9} \rightarrow \frac{2}{3}$

$\frac{14}{21} \rightarrow \frac{2}{3}$

$\frac{55}{90} \rightarrow \frac{11}{18}$

$\frac{24}{40} \rightarrow \frac{3}{5}$

$\frac{18}{96} \rightarrow \frac{3}{16}$

$\frac{12}{16} \rightarrow \frac{3}{4}$

$\frac{3}{9} \rightarrow \frac{1}{3}$

$\frac{11}{66} \rightarrow \frac{1}{6}$

$\frac{10}{40} \rightarrow \frac{1}{4}$

$\frac{25}{75} \rightarrow \frac{1}{3}$

$\frac{9}{36} \rightarrow \frac{1}{4}$

Convert the following fractions to mixed numbers. (Pages 70-71)

$$\frac{12}{9} \rightarrow 1\frac{1}{3}$$

$$\frac{86}{6} \rightarrow 14\frac{1}{3}$$

$$\frac{49}{4} \rightarrow 12\frac{1}{4}$$

$$\frac{37}{4} \rightarrow 9\frac{1}{4}$$

$$\frac{24}{9} \rightarrow 2\frac{2}{3}$$

$$\frac{81}{6} \rightarrow 13\frac{1}{2}$$

$$\frac{72}{7} \rightarrow 10\frac{2}{7}$$

$$\frac{86}{8} \rightarrow 10\frac{3}{4}$$

$$\frac{72}{5} \rightarrow 14\frac{2}{5}$$

$$\frac{42}{9} \rightarrow 4\frac{2}{3}$$

$$\frac{40}{6} \rightarrow 6\frac{2}{3}$$

$$\frac{28}{3} \rightarrow 9\frac{1}{3}$$

$$\frac{16}{6} \rightarrow 2\frac{2}{3}$$

$$\frac{7}{2} \rightarrow 3\frac{1}{2}$$

$$\frac{51}{2} \rightarrow 25\frac{1}{2}$$

$$\frac{12}{7} \rightarrow 1\frac{5}{7}$$

$$\frac{37}{9} \rightarrow 4\frac{1}{9}$$

$$\frac{84}{8} \rightarrow 10\frac{1}{2}$$

$$\frac{3}{2} \rightarrow 1\frac{1}{2}$$

$$\frac{92}{3} \rightarrow 30\frac{2}{3}$$

$$\frac{62}{6} \rightarrow 10\frac{1}{3}$$

$$\frac{45}{4} \rightarrow 11\frac{1}{4}$$

$$\frac{97}{6} \rightarrow 16\frac{1}{6}$$

$$\frac{39}{6} \rightarrow 6\frac{1}{2}$$

$$\frac{63}{4} \rightarrow 15\frac{3}{4}$$

$$\frac{59}{7} \rightarrow 8\frac{3}{7}$$

$$\frac{33}{7} \rightarrow 4\frac{5}{7}$$

$$\frac{69}{4} \rightarrow 17\frac{1}{4}$$

$$\frac{35}{6} \rightarrow 5\frac{5}{6}$$

$$\frac{18}{7} \rightarrow 2\frac{4}{7}$$

$$\frac{83}{3} \rightarrow 27\frac{2}{3}$$

$$\frac{9}{4} \rightarrow 2\frac{1}{4}$$

$$\frac{24}{7} \rightarrow 3\frac{3}{7}$$

$$\frac{7}{4} \rightarrow 1\frac{3}{4}$$

$$\frac{18}{8} \rightarrow 2\frac{1}{4}$$

$$\frac{21}{2} \rightarrow 10\frac{1}{2}$$

$$\frac{90}{7} \rightarrow 12\frac{6}{7}$$

$$\frac{37}{9} \rightarrow 4\frac{1}{9}$$

$$\frac{41}{3} \rightarrow 13\frac{2}{3}$$

$$\frac{10}{3} \rightarrow 3\frac{1}{3}$$

$$\frac{14}{6} \rightarrow 2\frac{1}{3}$$

$$\frac{38}{3} \rightarrow 12\frac{2}{3}$$

$$\frac{79}{2} \rightarrow 39\frac{1}{2}$$

$$\frac{82}{4} \rightarrow 20\frac{1}{2}$$

$$\frac{50}{6} \rightarrow 8\frac{1}{3}$$

$$\frac{25}{3} \rightarrow 8\frac{1}{3}$$

$$\frac{20}{7} \rightarrow 2\frac{6}{7}$$

$$\frac{34}{4} \rightarrow 8\frac{1}{2}$$

$$\frac{75}{2} \rightarrow 37\frac{1}{2}$$

$$\frac{81}{5} \rightarrow 16\frac{1}{5}$$

$$\frac{67}{9} \rightarrow 7\frac{4}{9}$$

$$\frac{74}{5} \rightarrow 14\frac{4}{5}$$

$$\frac{31}{3} \rightarrow 10\frac{1}{3}$$

$$\frac{74}{9} \rightarrow 8\frac{2}{9}$$

$$\frac{53}{2} \rightarrow 26\frac{1}{2}$$

$$\frac{73}{7} \rightarrow 10\frac{3}{7}$$

$$\frac{57}{9} \rightarrow 6\frac{1}{3}$$

$$\frac{35}{9} \rightarrow 3\frac{8}{9}$$

$$\frac{56}{3} \rightarrow 18\frac{2}{3}$$

$$\frac{69}{7} \rightarrow 9\frac{6}{7}$$

**Add the fractions.** (Page 73)

$$\frac{2}{9} + \frac{2}{9} = \frac{4}{9}$$

$$\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$$

$$\frac{2}{7} + \frac{2}{7} = \frac{4}{7}$$

$$\frac{3}{7} + \frac{3}{7} = \frac{6}{7}$$

$$\frac{3}{10} + \frac{7}{10} = 1$$

$$\frac{3}{8} + \frac{1}{8} = \frac{1}{2}$$

$$\frac{1}{6} + \frac{5}{6} = 1$$

$$\frac{5}{8} + \frac{1}{8} = \frac{3}{4}$$

$$\frac{5}{6} + \frac{5}{6} = 1 \frac{2}{3}$$

$$\frac{5}{8} + \frac{3}{8} = 1$$

$$\frac{1}{9} + \frac{4}{9} = \frac{5}{9}$$

$$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$$

**Real Life Math** (Page 74)

Ron has  $1 \frac{1}{3}$  metres of wooden border on hand.

**Add the fractions.** (Pages 76-77)

$$\frac{1}{3} + \frac{1}{2} = \frac{5}{6}$$

$$\frac{2}{3} + \frac{1}{7} = \frac{17}{21}$$

$$\frac{2}{3} + \frac{1}{9} = \frac{7}{9}$$

$$\frac{1}{2} + \frac{2}{9} = \frac{13}{18}$$

$$\frac{1}{6} + \frac{5}{7} = \frac{37}{42}$$

$$\frac{5}{7} + \frac{3}{4} = 1 \frac{13}{28}$$

$$\frac{3}{7} + \frac{1}{3} = \frac{16}{21}$$

$$\frac{2}{7} + \frac{2}{9} = \frac{32}{63}$$

$$\frac{2}{9} + \frac{1}{6} = \frac{7}{18}$$

$$\frac{8}{9} + \frac{1}{2} = 1 \frac{7}{18}$$

$$\frac{1}{3} + \frac{5}{6} = 1 \frac{1}{6}$$

$$\frac{1}{8} + \frac{2}{5} = \frac{21}{40}$$

$$\frac{3}{4} + \frac{1}{2} = 1 \frac{1}{4}$$

$$\frac{7}{9} + \frac{1}{3} = 1 \frac{1}{9}$$

$$\frac{2}{3} + \frac{1}{2} = 1 \frac{1}{6}$$

$$\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$$

**Real Life Math** (Page 78)

Adam will add  $1 \frac{1}{12}$  cups of liquid to the saucepan.

**Subtract the fractions.** (Page 80)

$$\frac{4}{7} - \frac{3}{7} = \frac{1}{7}$$

$$\frac{5}{8} - \frac{1}{8} = \frac{4}{8}$$

$$\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$$

$$\frac{2}{5} - \frac{1}{5} = \frac{1}{5}$$

$$\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$$

$$\frac{4}{7} - \frac{2}{7} = \frac{2}{7}$$

$$\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$$

$$\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$$

$$\frac{9}{10} - \frac{3}{10} = \frac{6}{10}$$

$$\frac{5}{9} - \frac{4}{9} = \frac{1}{9}$$

$$\frac{4}{9} - \frac{1}{9} = \frac{3}{9}$$

$$\frac{3}{5} - \frac{2}{5} = \frac{1}{5}$$

**Real Life Math** (Page 81)

$\frac{3}{5}$  of a metre of material is left on the roll.

**Subtract the fractions.** (Pages 83-85)

$$\frac{1}{2} - \frac{1}{5} = \frac{3}{10}$$

$$\frac{9}{10} - \frac{1}{9} = \frac{71}{90}$$

$$\frac{2}{3} - \frac{3}{5} = \frac{1}{15}$$

$$\frac{7}{9} - \frac{3}{8} = \frac{29}{72}$$

$$\frac{3}{7} - \frac{1}{9} = \frac{20}{63}$$

$$\frac{3}{4} - \frac{4}{7} = \frac{5}{28}$$

$$\frac{5}{7} - \frac{3}{10} = \frac{29}{70}$$

$$\frac{3}{5} - \frac{1}{2} = \frac{1}{10}$$

$$\frac{3}{5} - \frac{1}{3} = \frac{4}{15}$$

$$\frac{3}{4} - \frac{2}{3} = \frac{1}{12}$$

$$\frac{3}{10} - \frac{1}{9} = \frac{17}{90}$$

$$\frac{4}{5} - \frac{2}{3} = \frac{2}{15}$$

$$\frac{5}{7} - \frac{1}{2} = \frac{3}{14}$$

$$\frac{5}{6} - \frac{1}{2} = \frac{1}{3}$$

$$\frac{5}{7} - \frac{5}{9} = \frac{10}{63}$$

$$\frac{7}{10} - \frac{1}{4} = \frac{9}{20}$$

$$\frac{3}{8} - \frac{1}{9} = \frac{19}{72}$$

$$\frac{1}{3} - \frac{1}{9} = \frac{2}{9}$$

$$\frac{2}{5} - \frac{1}{4} = \frac{3}{20}$$

$$\frac{5}{9} - \frac{1}{8} = \frac{31}{72}$$

$$\frac{4}{5} - \frac{1}{8} = \frac{27}{40}$$

$$\frac{7}{9} - \frac{3}{10} = \frac{43}{90}$$

$$\frac{5}{7} - \frac{3}{5} = \frac{4}{35}$$

$$\frac{4}{9} - \frac{2}{5} = \frac{2}{45}$$

$$\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$$

$$\frac{3}{4} - \frac{1}{2} = \frac{1}{4}$$

$$\frac{3}{4} - \frac{3}{7} = \frac{9}{28}$$

$$\frac{3}{8} - \frac{1}{5} = \frac{7}{40}$$

$$\frac{2}{7} - \frac{1}{5} = \frac{3}{35}$$

$$\frac{2}{3} - \frac{2}{7} = \frac{8}{21}$$

$$\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$$

$$\frac{4}{5} - \frac{1}{7} = \frac{23}{35}$$

$$\frac{2}{5} - \frac{1}{3} = \frac{1}{15}$$

$$\frac{7}{10} - \frac{1}{2} = \frac{1}{5}$$

$$\frac{5}{8} - \frac{5}{9} = \frac{5}{72}$$

$$\frac{9}{10} - \frac{5}{9} = \frac{31}{90}$$

$$\frac{3}{4} - \frac{4}{9} = \frac{11}{36}$$

$$\frac{2}{3} - \frac{3}{10} = \frac{11}{30}$$

$$\frac{4}{5} - \frac{1}{2} = \frac{3}{10}$$

$$\frac{1}{3} - \frac{1}{5} = \frac{2}{15}$$

$$\frac{8}{9} - \frac{6}{7} = \frac{2}{63}$$

$$\frac{3}{7} - \frac{1}{3} = \frac{2}{21}$$

**Real Life Math** (Page 86)

There will be  $\frac{11}{20}$  of a barrel of fuel left by noon.

**Multiply the fractions.** (Pages 88 – 89)

$$\frac{3}{4} \times \frac{3}{7} = \frac{9}{28}$$

$$\frac{8}{9} \times \frac{1}{7} = \frac{8}{63}$$

$$\frac{3}{5} \times \frac{5}{6} = \frac{1}{2}$$

$$\frac{4}{5} \times \frac{1}{9} = \frac{4}{45}$$

$$\frac{5}{8} \times \frac{1}{2} = \frac{5}{16}$$

$$\frac{7}{8} \times \frac{1}{2} = \frac{7}{16}$$

$$\frac{3}{5} \times \frac{4}{9} = \frac{4}{15}$$

$$\frac{2}{7} \times \frac{1}{2} = \frac{1}{7}$$

$$\frac{3}{5} \times \frac{4}{5} = \frac{12}{25}$$

$$\frac{1}{3} \times \frac{3}{4} = \frac{1}{4}$$

$$\frac{1}{2} \times \frac{4}{9} = \frac{2}{9}$$

$$\frac{4}{5} \times \frac{7}{8} = \frac{7}{10}$$

$$\frac{1}{2} \times \frac{3}{10} = \frac{3}{20}$$

$$\frac{2}{3} \times \frac{3}{7} = \frac{2}{7}$$

$$\frac{1}{3} \times \frac{4}{9} = \frac{4}{27}$$

$$\frac{1}{2} \times \frac{3}{8} = \frac{3}{16}$$

$$\frac{1}{2} \times \frac{5}{9} = \frac{5}{18}$$

$$\frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$$

$$\frac{9}{10} \times \frac{4}{5} = \frac{18}{25}$$

$$\frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$$

$$\frac{1}{9} \times \frac{1}{6} = \frac{1}{54}$$

$$\frac{5}{8} \times \frac{2}{5} = \frac{1}{4}$$

**Real Life Math** (Page 90)

The second piece of pipe will be  $\frac{1}{3}$  of a metre in length.

**Multiply the fractions.** (Pages 92-93)

$$9 \times \frac{2}{3} = 6$$

$$16 \times \frac{3}{7} = 6 \frac{6}{7}$$

$$10 \times \frac{3}{8} = 3 \frac{3}{4}$$

$$8 \times \frac{1}{3} = 2 \frac{2}{3}$$

$$1 \times \frac{5}{6} = \frac{5}{6}$$

$$16 \times \frac{2}{3} = 10 \frac{2}{3}$$

$$13 \times \frac{2}{7} = 3 \frac{5}{7}$$

$$11 \times \frac{2}{3} = 7 \frac{1}{3}$$

$$12 \times \frac{1}{2} = 6$$

$$12 \times \frac{8}{9} = 10 \frac{2}{3}$$

$$10 \times \frac{3}{10} = 3$$

$$7 \times \frac{1}{7} = 1$$

**Real Life Math** (Page 94)

The whole case of screws weighs 16 kilograms.

Multiply the following. (Pages 96-97)

$$19 \times 4 \frac{1}{2} = 85 \frac{1}{2}$$

$$13 \times 4 \frac{1}{2} = 58 \frac{1}{2}$$

$$14 \times 10 \frac{8}{9} = 152 \frac{4}{9}$$

$$16 \times 3 \frac{2}{3} = 58 \frac{2}{3}$$

$$6 \times 9 \frac{3}{10} = 55 \frac{4}{5}$$

$$12 \times 8 \frac{3}{5} = 103 \frac{1}{5}$$

$$15 \times 4 \frac{4}{5} = 72$$

$$14 \times 5 \frac{1}{3} = 74 \frac{2}{3}$$

$$8 \times 4 \frac{6}{7} = 38 \frac{6}{7}$$

$$4 \times 5 \frac{1}{4} = 21$$

$$4 \times 5 \frac{1}{2} = 22$$

$$9 \times 8 \frac{3}{4} = 78 \frac{3}{4}$$

$$10 \times 4 \frac{9}{10} = 49$$

$$8 \times 3 \frac{4}{5} = 30 \frac{2}{5}$$

$$13 \times 2 \frac{3}{4} = 35 \frac{3}{4}$$

$$16 \times 10 \frac{2}{5} = 166 \frac{2}{5}$$

$$12 \times 5 \frac{1}{9} = 61 \frac{1}{3}$$

$$4 \times 2 \frac{8}{9} = 11 \frac{5}{9}$$

$$9 \times 9 \frac{3}{4} = 87 \frac{3}{4}$$

$$19 \times 9 \frac{1}{2} = 180 \frac{1}{2}$$

$$18 \times 1 \frac{2}{5} = 25 \frac{1}{5}$$

$$11 \times 3 \frac{6}{7} = 42 \frac{3}{7}$$

$$15 \times 10 \frac{2}{9} = 153 \frac{1}{3}$$

$$18 \times 4 \frac{3}{8} = 78 \frac{3}{4}$$

Real Life Math (Page 98)

Jeff will need  $33 \frac{3}{4}$  litres of oil for the boating season.

**Divide (Pages 102-103)**

$$\frac{5}{8} + \frac{1}{2} = 1 \frac{1}{4}$$

$$\frac{1}{2} + \frac{5}{8} = \frac{4}{5}$$

$$\frac{1}{7} + \frac{2}{3} = \frac{3}{14}$$

$$\frac{3}{7} + \frac{7}{8} = \frac{24}{49}$$

$$\frac{3}{5} + \frac{2}{3} = \frac{9}{10}$$

$$\frac{5}{6} + \frac{1}{5} = 4 \frac{1}{6}$$

$$\frac{7}{9} + 2 \frac{1}{2} = \frac{14}{45}$$

$$\frac{2}{7} + 4 = \frac{1}{14}$$

$$1 \frac{1}{5} + \frac{1}{6} = 7 \frac{1}{5}$$

$$1 \frac{4}{5} + \frac{1}{8} = 14 \frac{2}{5}$$

$$3 + \frac{6}{7} = 3 \frac{1}{2}$$

$$\frac{1}{3} + 2 = \frac{1}{6}$$

$$\frac{5}{9} + 3 = \frac{5}{27}$$

$$\frac{7}{9} + 7 = \frac{1}{9}$$

$$\frac{3}{4} + \frac{1}{3} = 2 \frac{1}{4}$$

$$\frac{4}{9} + \frac{2}{3} = \frac{2}{3}$$

$$\frac{1}{10} + 1 \frac{1}{3} = \frac{3}{40}$$

$$\frac{1}{3} + \frac{1}{2} = \frac{2}{3}$$

$$1 \frac{1}{9} + \frac{1}{5} = 5 \frac{5}{9}$$

$$\frac{1}{4} + \frac{1}{2} = \frac{1}{2}$$

$$\frac{1}{2} + \frac{5}{8} = \frac{4}{5}$$

$$\frac{2}{5} + \frac{2}{3} = \frac{3}{5}$$

$$\frac{2}{5} + \frac{1}{5} = 2$$

$$1 \frac{2}{3} + 3 = \frac{5}{9}$$

**Real life Math (Page 104)**

There are  $\frac{3}{16}$  of a cup of flavouring in each bowl.

Change each fraction to a decimal. (Page 107)

$\frac{8}{10}$	0.8	$\frac{1}{10}$	0.1	$\frac{3}{10}$	0.3	$\frac{9}{10}$	0.9
$\frac{2}{10}$	0.2	$\frac{4}{10}$	0.4	$\frac{5}{10}$	0.5	$\frac{7}{10}$	0.7
$\frac{37}{100}$	0.37	$\frac{97}{100}$	0.97	$\frac{52}{100}$	0.52	$\frac{66}{100}$	0.66
$\frac{78}{100}$	0.78	$\frac{83}{100}$	0.83	$\frac{88}{100}$	0.88	$\frac{45}{100}$	0.45
$\frac{50}{100}$	0.5	$\frac{54}{100}$	0.54	$\frac{59}{100}$	0.59	$\frac{69}{100}$	0.69
$\frac{369}{1000}$	0.369	$\frac{856}{1000}$	0.856	$\frac{688}{1000}$	0.688	$\frac{897}{1000}$	0.897
$\frac{361}{1000}$	0.361	$\frac{172}{1000}$	0.172	$\frac{212}{1000}$	0.212	$\frac{494}{1000}$	0.494

Write a fraction for each of the following. (Page 108)

0.9	$\frac{9}{10}$	0.6	$\frac{3}{5}$	0.5	$\frac{1}{2}$	0.2	$\frac{1}{5}$
2.7	$\frac{27}{10}$	3.8	$\frac{19}{5}$	1.3	$\frac{13}{10}$	2.1	$\frac{21}{10}$
0.81	$\frac{81}{100}$	0.92	$\frac{23}{25}$	0.94	$\frac{47}{50}$	0.83	$\frac{83}{100}$
0.58	$\frac{29}{50}$	0.62	$\frac{31}{50}$	0.98	$\frac{49}{50}$	0.71	$\frac{71}{100}$
4.97	$\frac{497}{100}$	1.11	$\frac{111}{100}$	2.71	$\frac{271}{100}$	8.42	$\frac{421}{50}$
0.386	$\frac{193}{500}$	0.585	$\frac{117}{200}$	0.652	$\frac{163}{250}$	0.238	$\frac{119}{500}$
0.212	$\frac{53}{250}$	4.174	$\frac{2087}{500}$	3.492	$\frac{873}{250}$	2.184	$\frac{273}{125}$

**Add the numbers. (Pages 110 – 111)**

$\begin{array}{r} 2.7 \\ + 6.2 \\ \hline 8.9 \end{array}$	$\begin{array}{r} 2.2 \\ + 8.3 \\ \hline 10.5 \end{array}$	$\begin{array}{r} 2.5 \\ + 5.5 \\ \hline 8 \end{array}$	$\begin{array}{r} 3.4 \\ + 6.1 \\ \hline 9.5 \end{array}$
$\begin{array}{r} 8.8 \\ + 1.7 \\ \hline 10.5 \end{array}$	$\begin{array}{r} 9.8 \\ + 6.2 \\ \hline 16 \end{array}$	$\begin{array}{r} 4.7 \\ + 4.6 \\ \hline 9.3 \end{array}$	$\begin{array}{r} 8.6 \\ + 4.5 \\ \hline 13.1 \end{array}$
$\begin{array}{r} 1.8 \\ + 7.6 \\ \hline 9.4 \end{array}$	$\begin{array}{r} 9.3 \\ + 1.3 \\ \hline 10.6 \end{array}$	$\begin{array}{r} 9.6 \\ + 7 \\ \hline 16.6 \end{array}$	$\begin{array}{r} 4.3 \\ + 9 \\ \hline 13.3 \end{array}$
$\begin{array}{r} 3.63 \\ + 9.39 \\ \hline 13.02 \end{array}$	$\begin{array}{r} 9.17 \\ + 2.55 \\ \hline 11.72 \end{array}$	$\begin{array}{r} 7.02 \\ + 9.21 \\ \hline 16.23 \end{array}$	$\begin{array}{r} 5.07 \\ + 4.12 \\ \hline 9.19 \end{array}$
$\begin{array}{r} 4.07 \\ + 1.4 \\ \hline 5.47 \end{array}$	$\begin{array}{r} 2.97 \\ + 4.1 \\ \hline 7.07 \end{array}$	$\begin{array}{r} 9.84 \\ + 5.52 \\ \hline 15.36 \end{array}$	$\begin{array}{r} 5.49 \\ + 8.87 \\ \hline 14.36 \end{array}$
$\begin{array}{r} 9.303 \\ + 5.840 \\ \hline 15.143 \end{array}$	$\begin{array}{r} 2.765 \\ + 8.397 \\ \hline 11.162 \end{array}$	$\begin{array}{r} 7.537 \\ + 4.911 \\ \hline 12.448 \end{array}$	$\begin{array}{r} 9.299 \\ + 4.471 \\ \hline 13.77 \end{array}$
$\begin{array}{r} 7.607 \\ + 7.39 \\ \hline 14.997 \end{array}$	$\begin{array}{r} 1.123 \\ + 3.32 \\ \hline 4.443 \end{array}$	$\begin{array}{r} 2.402 \\ + 7.025 \\ \hline 9.427 \end{array}$	$\begin{array}{r} 4.544 \\ + 6.77 \\ \hline 11.314 \end{array}$
$\begin{array}{r} 8.187 \\ + 2.87 \\ \hline 11.057 \end{array}$	$\begin{array}{r} 5.275 \\ + 2.546 \\ \hline 7.821 \end{array}$	$\begin{array}{r} 2.168 \\ + 1.675 \\ \hline 3.843 \end{array}$	$\begin{array}{r} 8.406 \\ + 1.927 \\ \hline 10.333 \end{array}$

**Real Life Math (Page 112)**

The combined thickness of tin is 0.63 centimetres.

**Subtract the numbers. (Page 114)**

$\begin{array}{r} 8.7 \\ - 7.1 \\ \hline 1.6 \end{array}$	$\begin{array}{r} 7.5 \\ - 5.3 \\ \hline 2.2 \end{array}$	$\begin{array}{r} 9.6 \\ - 7 \\ \hline 2.6 \end{array}$	$\begin{array}{r} 4.8 \\ - 4.1 \\ \hline 0.7 \end{array}$
$\begin{array}{r} 8.6 \\ - 7 \\ \hline 1.6 \end{array}$	$\begin{array}{r} 9.3 \\ - 7.2 \\ \hline 2.1 \end{array}$	$\begin{array}{r} 8.2 \\ - 2.1 \\ \hline 6.1 \end{array}$	$\begin{array}{r} 9.2 \\ - 3.2 \\ \hline 6 \end{array}$
$\begin{array}{r} 4.29 \\ - 1.26 \\ \hline 3.03 \end{array}$	$\begin{array}{r} 8.45 \\ - 3.98 \\ \hline 4.47 \end{array}$	$\begin{array}{r} 7.11 \\ - 6.93 \\ \hline 0.18 \end{array}$	$\begin{array}{r} 8.21 \\ - 1.91 \\ \hline 6.3 \end{array}$
$\begin{array}{r} 8.49 \\ - 2.29 \\ \hline 6.2 \end{array}$	$\begin{array}{r} 4.15 \\ - 2.9 \\ \hline 1.25 \end{array}$	$\begin{array}{r} 9.86 \\ - 8.98 \\ \hline 0.88 \end{array}$	$\begin{array}{r} 6.71 \\ - 5.7 \\ \hline 1.01 \end{array}$
$\begin{array}{r} 9.774 \\ - 3.684 \\ \hline 6.09 \end{array}$	$\begin{array}{r} 5.545 \\ - 2.497 \\ \hline 3.048 \end{array}$	$\begin{array}{r} 4.448 \\ - 3.786 \\ \hline 0.662 \end{array}$	$\begin{array}{r} 7.975 \\ - 4.427 \\ \hline 3.548 \end{array}$
$\begin{array}{r} 4.478 \\ - 3.67 \\ \hline 0.808 \end{array}$	$\begin{array}{r} 3.519 \\ - 1.49 \\ \hline 2.029 \end{array}$	$\begin{array}{r} 7.843 \\ - 1.882 \\ \hline 5.961 \end{array}$	$\begin{array}{r} 7.967 \\ - 1.741 \\ \hline 6.226 \end{array}$

**Real Life Math (Page 115)**

The spark plug gap is too large by 1.24 millimetres.

**Multiply the numbers. (Page 117)**

$\begin{array}{r} 6.59 \\ \times 1.41 \\ \hline 7.5126 \end{array}$	$\begin{array}{r} 5.29 \\ \times 10 \\ \hline 52.9 \end{array}$	$\begin{array}{r} 3.11 \\ \times 99.4 \\ \hline 309.134 \end{array}$	$\begin{array}{r} 53.3 \\ \times 4.31 \\ \hline 229.723 \end{array}$	$\begin{array}{r} 19.5 \\ \times 80.1 \\ \hline 1561.95 \end{array}$
$\begin{array}{r} 6.76 \\ \times 4.06 \\ \hline 27.4456 \end{array}$	$\begin{array}{r} 1.27 \\ \times 13 \\ \hline 16.51 \end{array}$	$\begin{array}{r} 1.80 \\ \times 3.1 \\ \hline 5.58 \end{array}$	$\begin{array}{r} 70.2 \\ \times 8.78 \\ \hline 616.356 \end{array}$	$\begin{array}{r} 86.9 \\ \times 39.3 \\ \hline 3415.17 \end{array}$
$\begin{array}{r} 5.11 \\ \times 5.86 \\ \hline 29.9446 \end{array}$	$\begin{array}{r} 5.36 \\ \times 795 \\ \hline 4261.2 \end{array}$	$\begin{array}{r} 6.32 \\ \times 78.6 \\ \hline 496.752 \end{array}$	$\begin{array}{r} 41.7 \\ \times 7.62 \\ \hline 317.754 \end{array}$	$\begin{array}{r} 71.1 \\ \times 8.80 \\ \hline 625.68 \end{array}$
$\begin{array}{r} 6.43 \\ \times 4.03 \\ \hline 25.9129 \end{array}$	$\begin{array}{r} 1.23 \\ \times 62 \\ \hline 76.26 \end{array}$	$\begin{array}{r} 3.92 \\ \times 3.6 \\ \hline 14.112 \end{array}$	$\begin{array}{r} 91.3 \\ \times 1.64 \\ \hline 149.732 \end{array}$	$\begin{array}{r} 20.2 \\ \times 2.2 \\ \hline 44.44 \end{array}$
$\begin{array}{r} 8.52 \\ \times 2.45 \\ \hline 20.874 \end{array}$	$\begin{array}{r} 3.96 \\ \times 207 \\ \hline 819.72 \end{array}$	$\begin{array}{r} 5.59 \\ \times 98.5 \\ \hline 550.615 \end{array}$	$\begin{array}{r} 65.5 \\ \times 8.08 \\ \hline 529.24 \end{array}$	$\begin{array}{r} 76.6 \\ \times 55.8 \\ \hline 4274.28 \end{array}$
$\begin{array}{r} 2.27 \\ \times 730 \\ \hline 1657.1 \end{array}$	$\begin{array}{r} 4.73 \\ \times 45.6 \\ \hline 215.688 \end{array}$	$\begin{array}{r} 2.75 \\ \times 59.6 \\ \hline 163.9 \end{array}$	$\begin{array}{r} 370 \\ \times 1.44 \\ \hline 532.8 \end{array}$	$\begin{array}{r} 69.5 \\ \times 99.5 \\ \hline 6915.25 \end{array}$

**Real Life Math (Page 118)**

The wood to be processed will weigh 38.4 kilograms.

**Divide the numbers. (Page 120)**

$5.54 \div 2 = 2.77$	$63.8 \div 2 = 31.9$	$0.843 \div 3 = 0.281$
$0.118 \div 2 = 0.059$	$78.5 \div 5 = 15.7$	$9.96 \div 3 = 3.32$
$5.14 \div 2 = 2.57$	$86.4 \div 3 = 28.8$	$0.415 \div 5 = 0.083$
$0.155 \div 5 = 0.031$	$15.3 \div 3 = 5.1$	$5.38 \div 2 = 2.69$
$1.83 \div 3 = 0.61$	$64.8 \div 4 = 16.2$	$0.644 \div 4 = 0.161$
$0.396 \div 6 = 0.066$	$55.8 \div 2 = 27.9$	$8.24 \div 2 = 4.12$

**Real Life Math (Page 121)**

Each ball weighs 0.19 kilograms.

**Divide the numbers.** (Pages 123 – 124)

$42 \div 0.7 = 60$

$40 \div 0.8 = 50$

$68 \div 0.4 = 170$

$77 \div 0.7 = 110$

$24 \div 0.6 = 40$

$86 \div 0.2 = 430$

$232 \div 0.04 = 5800$

$578 \div 0.02 = 28900$

$784 \div 0.04 = 19600$

$309 \div 0.03 = 10300$

$456 \div 0.04 = 11400$

$916 \div 0.04 = 22900$

$326 \div 0.02 = 16300$

$610 \div 0.05 = 12200$

$865 \div 0.05 = 17300$

$822 \div 0.002 = 411000$

$860 \div 0.005 = 172000$

$432 \div 0.004 = 108000$

$596 \div 0.002 = 298000$

$180 \div 0.009 = 20000$

$430 \div 0.005 = 86000$

$500 \div 0.005 = 100000$

$885 \div 0.003 = 295000$

$662 \div 0.002 = 331000$

**Real Life Math** (Page 125)

Carol can fill 60 spray containers with this amount of pesticide.

**Divide the numbers.** (Pages 127 – 128)

$7.5 \div 0.5 = 15$

$9.9 \div 0.3 = 33$

$1.2 \div 0.4 = 3$

$0.28 \div 0.7 = 0.4$

$0.54 \div 0.9 = 0.6$

$0.44 \div 0.4 = 1.1$

$78.8 \div 0.4 = 197$

$5.76 \div 0.3 = 19.2$

$0.939 \div 0.3 = 3.13$

$378.2 \div 0.2 = 1891$

$94.64 \div 0.4 = 236.6$

$4.296 \div 0.3 = 14.32$

$5.5 \div 0.05 = 110$

$9.5 \div 0.05 = 190$

$1.2 \div 0.04 = 30$

$0.27 \div 0.09 = 3$

$0.77 \div 0.07 = 11$

$0.62 \div 0.02 = 31$

$31.4 \div 0.02 = 1570$

$1.42 \div 0.02 = 71$

$0.586 \div 0.02 = 29.3$

$695.4 \div 0.06 = 11590$

$55.28 \div 0.04 = 1382$

$9.322 \div 0.02 = 466.1$

$87.8 \div 0.002 = 43900$

$42.5 \div 0.005 = 8500$

$2.16 \div 0.003 = 720$

$1.42 \div 0.002 = 710$

$0.972 \div 0.009 = 108$

$0.875 \div 0.005 = 175$

$845.5 \div 0.005 = 169100$

$545.8 \div 0.002 = 272900$

$46.04 \div 0.004 = 11510$

$94.84 \div 0.004 = 23710$

$2.298 \div 0.006 = 383$

$0.9008 \div 0.002 = 450.4$

**Real Life Math** (Page 129)

There are 310 bearings in each box.

**Convert each percent to both fraction and decimal forms. (Page 130)**

<b>Percent</b>	<b>Fraction</b>	<b>Decimal</b>
28%	$\frac{7}{25}$	0.28
12%	$\frac{3}{25}$	0.12
8%	$\frac{2}{25}$	0.08
31%	$\frac{31}{100}$	0.31
60%	$\frac{3}{5}$	0.6

**Find the percentages (Page 132)**

$$95\% \text{ of } 162 = 153.9$$

$$39\% \text{ of } 75 = 29.25$$

$$51\% \text{ of } 145 = 73.95$$

$$9\% \text{ of } 831 = 74.79$$

$$80\% \text{ of } 131 = 104.8$$

$$57\% \text{ of } 759 = 432.63$$

$$79\% \text{ of } 204 = 161.16$$

$$4\% \text{ of } 288 = 11.52$$

$$22\% \text{ of } 982 = 216.04$$

$$54\% \text{ of } 206 = 111.24$$

$$87\% \text{ of } 387 = 336.69$$

$$25\% \text{ of } 118 = 29.5$$

$$14\% \text{ of } 676 = 94.64$$

$$17\% \text{ of } 508 = 86.36$$

$$39\% \text{ of } 65.1 = 25.389$$

$$44\% \text{ of } 6.22 = 2.7368$$

$$66\% \text{ of } 9.25 = 6.105$$

$$35\% \text{ of } 98.7 = 34.545$$

$$39\% \text{ of } 5.9 = 2.301$$

$$67\% \text{ of } 6.8 = 4.556$$

**Real Life Math (Page 133)**

Sandra will earn \$266 in commission that week.