

CHAPTER  
3

# Whole Number Multiplication and Division

## Worksheet 1 Multiplying by a 1-Digit Number

Complete the multiplication by ones. Then regroup into tens and ones if possible.

Example

$$3 \text{ ones} \times 3 = \underline{9} \text{ ones}$$

1.  $4 \text{ ones} \times 2 = \underline{\hspace{2cm}} \text{ ones}$

2.  $7 \text{ ones} \times 4 = 28 \text{ ones}$

$$= \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$$

3.  $8 \text{ ones} \times 6 = \underline{\hspace{2cm}} \text{ ones}$

$$= \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$$

Complete the multiplication by tens. Then regroup into hundreds and tens.

Example

$$7 \text{ tens} \times 4 = \underline{28} \text{ tens}$$

$$= \underline{2} \text{ hundreds } \underline{8} \text{ tens}$$

4.  $4 \text{ tens} \times 5 = \underline{\hspace{2cm}} \text{ tens}$

$$= \underline{\hspace{2cm}} \text{ hundreds}$$

5.  $6 \text{ tens} \times 7 = \underline{\hspace{2cm}} \text{ tens}$

$$= \underline{\hspace{2cm}} \text{ hundreds } \underline{\hspace{2cm}} \text{ tens}$$

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**Complete the multiplication by hundreds. Then regroup into thousands and hundreds.**

*Example*

$$2 \text{ hundreds} \times 9 = 18 \text{ hundreds}$$

$$= \underline{1} \text{ thousand } \underline{8} \text{ hundreds}$$

**6.**  $3 \text{ hundreds} \times 6 = \underline{\hspace{2cm}} \text{ hundreds}$

$$= \underline{\hspace{2cm}} \text{ thousand } \underline{\hspace{2cm}} \text{ hundreds}$$

**7.**  $7 \text{ hundreds} \times 4 = \underline{\hspace{2cm}} \text{ hundreds}$

$$= \underline{\hspace{2cm}} \text{ thousands } \underline{\hspace{2cm}} \text{ hundreds}$$

**8.**  $8 \text{ hundreds} \times 6 = \underline{\hspace{2cm}} \text{ hundreds}$

$$= \underline{\hspace{2cm}} \text{ thousands } \underline{\hspace{2cm}} \text{ hundreds}$$

**9.**  $5 \text{ hundreds} \times 8 = \underline{\hspace{2cm}} \text{ hundreds}$

$$= \underline{\hspace{2cm}} \text{ thousands}$$

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**Multiply and find the missing numbers.***Example*

$3,821 \times 4 = ?$

**Step 1**

Multiply 1 one by 4.

$1 \text{ one} \times 4 = \underline{4} \text{ ones}$

	3			
	3,	8	2	1
×				4
1	5,	2	8	4

**Step 2**

Multiply 2 tens by 4.

$2 \text{ tens} \times 4 = \underline{8} \text{ tens}$

**Step 3**

Multiply 8 hundreds by 4.

$8 \text{ hundreds} \times 4 = \underline{32} \text{ hundreds}$

$= \underline{3} \text{ thousands } \underline{2} \text{ hundreds}$

**Step 4**

Multiply 3 thousands by 4.

$3 \text{ thousands} \times 4 = \underline{12} \text{ thousands}$

Add the thousands.

$\underline{12} \text{ thousands} + 3 \text{ thousands} = \underline{15} \text{ thousands}$

$\text{So, } 3,821 \times 4 = \underline{15,284}.$

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10.  $5,632 \times 3$

Step 1

$2 \text{ ones} \times 3 = \underline{\hspace{2cm}} \text{ ones}$

Step 2

$3 \text{ tens} \times 3 = \underline{\hspace{2cm}} \text{ tens}$

Step 3

$6 \text{ hundreds} \times 3$

$= \underline{\hspace{2cm}} \text{ hundreds}$

$= 1 \text{ thousand } \underline{\hspace{2cm}} \text{ hundreds}$

Step 4

$5 \text{ thousands} \times 3 = 15 \text{ thousands}$

Add the thousands.

$15 \text{ thousands} + 1 \text{ thousand} = \underline{\hspace{2cm}} \text{ thousands}$

So,  $5,632 \times 3 = \underline{\hspace{2cm}}$ .

$$\begin{array}{r} \textcircled{1} \\ 5, \quad 6 \quad 3 \quad 2 \\ \times \quad \quad \quad 3 \\ \hline \square \square, \square \square \square \end{array}$$

Name: \_\_\_\_\_

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11.  $5,819 \times 5$

$$\begin{array}{r} \square \quad \quad \quad \square 4 \\ 5, \quad 8 \quad 1 \quad 9 \\ \times \\ \hline \square 2 \quad \square 9, \quad \square \quad \square \quad \square \\ \hline \end{array}$$

Step 1

$$9 \text{ ones} \times 5 = 45 \text{ ones}$$

$$= 4 \text{ tens} \text{ _____ ones}$$

Step 2

$$1 \text{ ten} \times 5 = \text{ _____ tens}$$

Add the tens.

$$\text{ _____ tens} + 4 \text{ tens} = \text{ _____ tens}$$

Step 3

$$8 \text{ hundreds} \times 5$$

$$= 40 \text{ hundreds} = \text{ _____ thousands}$$

Step 4

$$5 \text{ thousands} \times 5 = \text{ _____ thousands}$$

Add the thousands.

$$\text{ _____ thousands} + \text{ _____ thousands} = 29 \text{ thousands}$$

$$\text{So, } 5,819 \times 5 = \text{ _____}.$$

Name: \_\_\_\_\_

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12.  $8,720 \times 4$

Step 1

0 ones  $\times 4 =$  \_\_\_\_\_ ones

Step 2

2 tens  $\times 4 =$  \_\_\_\_\_ tens

Step 3

7 hundreds  $\times 4$

$=$  \_\_\_\_\_ hundreds  $=$  \_\_\_\_\_ thousands \_\_\_\_\_ hundreds

Step 4

8 thousands  $\times 4 =$  \_\_\_\_\_ thousands

Add the thousands.

\_\_\_\_\_ thousands  $+$  \_\_\_\_\_ thousands  $=$  \_\_\_\_\_ thousands

So,  $8,720 \times 4 =$  \_\_\_\_\_.

$$\begin{array}{r} \square \\ 8,720 \\ \times \quad 4 \\ \hline \square \square \square \square \square \end{array}$$

Name: \_\_\_\_\_

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13.  $6,509 \times 6$

	□		□	
	6,	5	0	9
×				6

Step 1

$9 \text{ ones} \times 6$

$=$  \_\_\_\_\_ ones

$=$  \_\_\_\_\_ tens \_\_\_\_\_ ones

Step 2

$0 \text{ tens} \times 6 =$  \_\_\_\_\_ tens

Add the tens.

\_\_\_\_\_ tens + \_\_\_\_\_ tens = \_\_\_\_\_ tens

Step 3

$5 \text{ hundreds} \times 6$

$=$  \_\_\_\_\_ hundreds

$=$  \_\_\_\_\_ thousands

Step 4

$6 \text{ thousands} \times 6 =$  \_\_\_\_\_ thousands

Add the thousands.

\_\_\_\_\_ thousands + \_\_\_\_\_ thousands = \_\_\_\_\_ thousands

So,  $6,509 \times 6 =$  \_\_\_\_\_.

Name: \_\_\_\_\_

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14.  $4,768 \times 7$

Step 1

$8 \text{ ones} \times 7 = \underline{\hspace{2cm}} \text{ ones}$

$= \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$

Step 2

$6 \text{ tens} \times 7 = \underline{\hspace{2cm}} \text{ tens}$

Add the tens.

$\underline{\hspace{2cm}} \text{ tens} + \underline{\hspace{2cm}} \text{ tens}$

$= \underline{\hspace{2cm}} \text{ tens}$

$= \underline{\hspace{2cm}} \text{ hundreds } \underline{\hspace{2cm}} \text{ tens}$

Step 3

$7 \text{ hundreds} \times 7 = \underline{\hspace{2cm}} \text{ hundreds}$

Add the hundreds.

$\underline{\hspace{2cm}} \text{ hundreds} + 4 \text{ hundreds}$

$= \underline{\hspace{2cm}} \text{ hundreds}$

$= \underline{\hspace{2cm}} \text{ thousands } \underline{\hspace{2cm}} \text{ hundreds}$

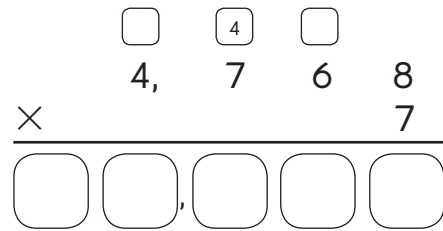
Step 4

$4 \text{ thousands} \times 7 = \underline{\hspace{2cm}} \text{ thousands}$

Add the thousands.

$\underline{\hspace{2cm}} \text{ thousands} + \underline{\hspace{2cm}} \text{ thousands} = \underline{\hspace{2cm}} \text{ thousands}$

So,  $4,768 \times 7 = \underline{\hspace{2cm}}$ .





Name: \_\_\_\_\_

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**Multiply.**

**15.**  $7,643 \times 2$

$$\begin{array}{r} \square \\ 7,643 \\ \times \phantom{0000} 2 \\ \hline \square\square\square,\square\square\square \end{array}$$

**16.**  $6,923 \times 8$

$$\begin{array}{r} \square \quad \square \quad \square \\ 6,923 \\ \times \phantom{0000} 8 \\ \hline \square\square\square,\square\square\square \end{array}$$

**Multiply using the place value of each digit.**

*Example*

$$\begin{array}{r} 8,153 \\ \times \phantom{0000} 4 \\ \hline 32,000 \end{array} \rightarrow \begin{array}{l} 3 \times 4 = \underline{12} \\ 50 \times 4 = \underline{200} \\ 100 \times 4 = \underline{400} \\ 8,000 \times 4 = \underline{32,000} \end{array}$$

**17.**

$$\begin{array}{r} 5,347 \\ \times \phantom{0000} 3 \\ \hline \square\square\square,\square\square\square \end{array} \rightarrow \begin{array}{l} 7 \times 3 = \underline{\hspace{2cm}} \\ 40 \times 3 = \underline{\hspace{2cm}} \\ 300 \times 3 = \underline{\hspace{2cm}} \\ 5,000 \times 3 = \underline{\hspace{2cm}} \end{array}$$

Name: \_\_\_\_\_

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18.

×	4,	8	3	5	
				7	
					→ $5 \times 7 =$ _____
					→ $30 \times 7 =$ _____
					→ $800 \times 7 =$ _____
					→ $4,000 \times 7 =$ _____

**Multiply.**

*Example*

		2	2	
	2,	1	3	4
×				7
1	4	9	3	8

19.

	7	0	0	
×			8	

20.

	9	2	8	
×			4	

21.

	4,	7	2	6
×				3

22.

	9,	2	1	0
×				6

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## Worksheet 2 Multiplying by a 2-Digit Number

Write the missing numbers.

Example

$$70 = \underline{7} \text{ tens}$$

$$9 \text{ tens} = \underline{90}$$

1.  $120 = \underline{\hspace{2cm}} \text{ tens}$

2.  $23 \text{ tens} = \underline{\hspace{2cm}}$

3.  $800 = \underline{\hspace{2cm}} \text{ hundreds}$

4.  $6 \text{ hundreds} = \underline{\hspace{2cm}}$

5.  $2,100 = \underline{\hspace{2cm}} \text{ hundreds}$

6.  $15 \text{ hundreds} = \underline{\hspace{2cm}}$

Multiply by tens.

Example

$$4 \times 90 = ?$$

$$4 \times 90 = 4 \times \underline{9} \text{ tens}$$

$$= \underline{36} \text{ tens}$$

$$= \underline{360}$$

7.  $6 \times 80 = 6 \times \underline{\hspace{1cm}} \text{ tens}$

$$= \underline{\hspace{1cm}} \text{ tens}$$

$$= \underline{\hspace{1cm}}$$

8.  $16 \times 30 = 16 \times \underline{\hspace{1cm}} \text{ tens}$

$$= \underline{\hspace{1cm}} \text{ tens}$$

$$= \underline{\hspace{1cm}}$$

9.  $21 \times 5 \text{ tens} = \underline{\hspace{1cm}} \text{ tens} = \underline{\hspace{1cm}}$

10.  $34 \times 6 \text{ tens} = \underline{\hspace{1cm}} \text{ tens} = \underline{\hspace{1cm}}$

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### Multiply by hundreds.

Example

$$6 \times 4 \text{ hundreds} = \underline{24} \text{ hundreds} = \underline{2,400}$$

11.  $5 \times 5 \text{ hundreds} = \underline{\hspace{2cm}} \text{ hundreds} = \underline{\hspace{2cm}}$

12.  $11 \times 300 = 11 \times \underline{\hspace{2cm}} \text{ hundreds}$   
 $= \underline{\hspace{2cm}} \text{ hundreds}$   
 $= \underline{\hspace{2cm}}$

### Write the missing numbers.

Example

$$\begin{aligned} 75 \times 20 &= 75 \times \underline{2} \times 10 \\ &= \underline{150} \times 10 \\ &= \underline{1,500} \end{aligned}$$

13.  $6 \times 70 = 6 \times \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}} \times 10$   
 $= \underline{\hspace{2cm}}$

14.  $74 \times 90 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$   
 $= \underline{\hspace{2cm}}$

Name: \_\_\_\_\_

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**Find each product.**

*Example*

$$12 \times 400 = ?$$

**Method 1**

$$12 \times 400 = 12 \times \underline{4} \times 100$$

$$= \underline{48} \times 100$$

$$= \underline{4,800}$$

**Method 2**

$$12 \times 400 = 12 \times \underline{100} \times 4$$

$$= \underline{1,200} \times 4$$

$$= \underline{4,800}$$

**15.**  $42 \times 200 = \underline{\hspace{2cm}} \times 100 \times \underline{\hspace{2cm}}$

$$= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

**16.**  $973 \times 300 = \underline{\hspace{2cm}} \times 3 \times \underline{\hspace{2cm}}$

$$= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

**Find each product.**

*Example*

$34 \times 55 = ?$

**Step 1**

Multiply 3 tens 4 ones by 5.  
 4 ones  $\times 5 = 20$  ones = 2 tens  
 3 tens  $\times 5 = 15$  tens  
 2 tens + 15 tens = 17 tens  
 Part of the product:  $34 \times 5 = 170$

$$\begin{array}{r} \phantom{0}^2 \\ 34 \\ \times 55 \\ \hline 170 \end{array}$$

**Step 2**

Multiply 3 tens 4 ones by 50.  
 4 ones  $\times 50 = 200$  ones = 2 hundreds  
 3 tens  $\times 50 = 150$  tens = 15 hundreds  
 2 hundreds + 15 hundreds = 17 hundreds  
 Part of the product:  $34 \times 50 = 1,700$

$$\begin{array}{r} \phantom{00}^2 \\ 34 \\ \times 55 \\ \hline 170 \\ 1,700 \end{array}$$

**Step 3**

Add the two parts of the product.  
 $170 + 1,700 = 1,870$

$$\begin{array}{r} \phantom{000}^2 \\ 34 \\ \times 55 \\ \hline 170 \\ 1,700 \\ \hline 1,870 \end{array}$$

**17.**

$$\begin{array}{r} \phantom{00}^2 \\ 92 \\ \times 43 \\ \hline \square\square\square \\ \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

**18.**

$$\begin{array}{r} \phantom{00}^2 \\ 36 \\ \times 57 \\ \hline \square\square\square \\ \square\square\square\square \\ \hline \square\square\square\square \end{array}$$

**Example**

$172 \times 23 = ?$

**Step 1**

Multiply 172 by 3.  
 $172 \times 3 = 516$

**Step 2**

Multiply 172 by 20.  
 $172 \times 20 = 3,440$

**Step 3**

Add the two parts of the product.  
 $516 + 3,440 = 3,956$

So,  $172 \times 23 = \underline{3,956}$ .

$$\begin{array}{r} \phantom{0}^2 \\ 172 \\ \times 23 \\ \hline 516 \end{array}$$

$$\begin{array}{r} \phantom{0}^1 \\ \phantom{0}^2 \\ 172 \\ \times 23 \\ \hline 516 \\ 3,440 \end{array}$$

$$\begin{array}{r} \phantom{0}^1 \\ \phantom{0}^2 \\ 172 \\ \times 23 \\ \hline 516 \\ 3,440 \\ \hline 3,956 \end{array}$$

**19.**

$$\begin{array}{r} \phantom{0}^2 \phantom{0}^4 \phantom{0}^0 \\ \times \phantom{0}^3 \phantom{0}^3 \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \end{array}$$

**20.**

$$\begin{array}{r} \phantom{0}^5 \phantom{0}^0 \phantom{0}^8 \\ \times \phantom{0}^6 \phantom{0}^9 \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \end{array}$$

**21.**

$$\begin{array}{r} \phantom{0}^9 \phantom{0}^0 \phantom{0}^0 \\ \times \phantom{0}^8 \phantom{0}^1 \\ \hline \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \end{array}$$

**22.**

$$\begin{array}{r} \phantom{0}^6 \phantom{0}^3 \phantom{0}^7 \\ \times \phantom{0}^7 \phantom{0}^5 \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\ \hline \phantom{0} \phantom{0} \phantom{0} \phantom{0} \end{array}$$

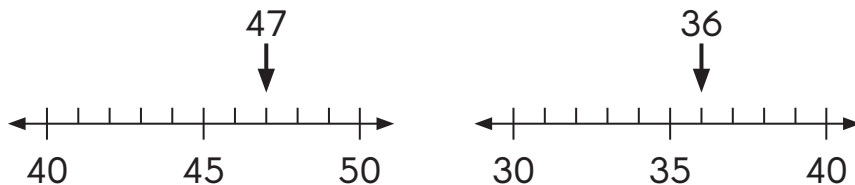
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**Use the number lines to round. Estimate each product.**

*Example*

Estimate  $47 \times 36$ .



47 is closer to 50 than 40. 36 is closer to 40 than 30.

$$\underline{50} \times \underline{40} = \underline{2,000}$$

$47 \times 36$  is about 2,000.



**23.** Estimate  $68 \times 52$ .

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$68 \times 52$  is about \_\_\_\_\_.



**24.** Estimate  $42 \times 73$ .

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$42 \times 73$  is about \_\_\_\_\_.



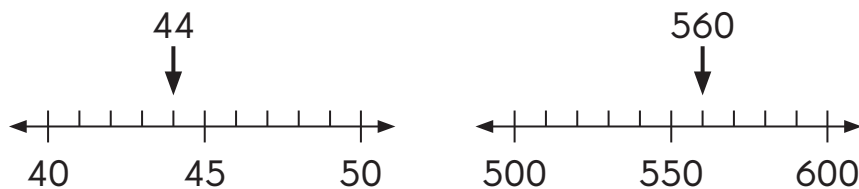
Name: \_\_\_\_\_

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**Use the number lines to round. Estimate each product.**

*Example*

Estimate  $44 \times 560$ .



44 is closer to 40 than 50.

560 is closer to 600 than 500.

$$\underline{40} \times \underline{600} = \underline{24,000}$$

$44 \times 560$  is about 24,000.



**25.** Estimate  $239 \times 77$ .

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$239 \times 77$  is about \_\_\_\_\_.



**26.** Estimate  $984 \times 36$ .

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$984 \times 36$  is about \_\_\_\_\_.

Name: \_\_\_\_\_

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**Multiply. Then estimate to check whether your answer is reasonable.**

Example

$$38 \times 94 = ?$$

$$\begin{array}{r} \phantom{0}7 \\ \phantom{0}3 \\ 38 \\ \times 94 \\ \hline 152 \\ 3,420 \\ \hline 3,572 \end{array}$$

38 is closer to 40 than to 30.

94 is closer to 90 than to 100.



$$38 \times 94 \text{ is about } \underline{40} \times \underline{90} \\ = \underline{3,600}$$

3,572 is close to 3,600. So, the answer is reasonable.

**27.**  $58 \times 27 = \underline{\hspace{2cm}}$

Estimate:  $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Is the answer reasonable? Explain.

\_\_\_\_\_

\_\_\_\_\_

	5	8
×	2	7

**28.**  $63 \times 75 = \underline{\hspace{2cm}}$

Estimate:  $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Is the answer reasonable? Explain.

\_\_\_\_\_

\_\_\_\_\_

	6	3
×	7	5

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Multiply. Then estimate to check whether your answer is reasonable.**

Example

$26 \times 246 = ?$

$$\begin{array}{r}
 \phantom{2}^1 \\
 \phantom{2}^2 \phantom{4}^3 \\
 246 \\
 \times 26 \\
 \hline
 1,476 \\
 4,920 \\
 \hline
 6,396
 \end{array}$$

26 is closer to 30 than to 20.  
 246 is closer to 200 than to 300.



$26 \times 246$  is about 30  $\times$  200  
 = 6,000

6,396 is close to 6,000. So, the answer is reasonable.

**29.**  $137 \times 34 =$  \_\_\_\_\_

$$\begin{array}{r}
 \phantom{1}^1 \phantom{3}^3 \phantom{7}^7 \\
 \times \phantom{3}^3 \phantom{4}^4 \\
 \hline
 \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\
 \phantom{0}, \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\
 \hline
 \phantom{0}, \phantom{0} \phantom{0} \phantom{0} \phantom{0}
 \end{array}$$

Estimate: \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

The answer is \_\_\_\_\_.

**30.**  $760 \times 83 =$  \_\_\_\_\_

$$\begin{array}{r}
 \phantom{7}^7 \phantom{6}^6 \phantom{0}^0 \\
 \times \phantom{8}^8 \phantom{3}^3 \\
 \hline
 \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\
 \phantom{0}, \phantom{0} \phantom{0} \phantom{0} \phantom{0} \\
 \hline
 \phantom{0}, \phantom{0} \phantom{0} \phantom{0} \phantom{0}
 \end{array}$$

Estimate: \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

The answer is \_\_\_\_\_.

Name: \_\_\_\_\_

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31.  $822 \times 97 =$  \_\_\_\_\_

		8	2	2	
	×		9	7	
		,			
		,			

Estimate: \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

The answer is \_\_\_\_\_.

32.  $485 \times 79 =$  \_\_\_\_\_

		4	8	5	
	×		7	9	
		,			
		,			

Estimate: \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

The answer is \_\_\_\_\_.

## Worksheet 3 Modeling Division with Regrouping

Complete the division steps.

Example

$$468 \div 3 = ?$$

$$\begin{array}{r} 1 \\ 3 \overline{)468} \\ \underline{300} \\ 1 \end{array}$$

Step 1

Divide the hundreds by 3.

4 hundreds  $\div$  3 = 1 hundred with 1 hundred left over

$$\begin{array}{r} 1 \\ 3 \overline{)468} \\ \underline{300} \\ 168 \end{array}$$

Regroup the hundreds.

1 hundred = 10 tens

Add the tens.

10 tens + 6 tens = 16 tens

$$\begin{array}{r} 15 \\ 3 \overline{)468} \\ \underline{300} \\ 168 \\ \underline{150} \\ 18 \end{array}$$

Step 2

Divide the tens by 3.

16 tens  $\div$  3 = 5 tens with 1 ten left over

Regroup the tens.

1 ten = 10 ones

Add the ones.

10 ones + 8 ones = 18 ones

$$\begin{array}{r} 156 \\ 3 \overline{)468} \\ \underline{300} \\ 168 \\ \underline{150} \\ 18 \\ \underline{18} \\ 0 \end{array}$$

Step 3

Divide the ones by 3.

18 ones  $\div$  3 = 6 ones

So,  $468 \div 3 = \underline{156}$ .

Name: \_\_\_\_\_

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1.  $580 \div 5$

	1			
5	)	5	8	0
		5	0	0
				0

Step 1

5 hundreds  $\div$  5 = 1 hundred

Step 2

\_\_\_\_\_ tens  $\div$  5  
= \_\_\_\_\_ ten with \_\_\_\_\_ tens left over

Regroup the tens.

\_\_\_\_\_ tens = \_\_\_\_\_ ones

Step 3

\_\_\_\_\_ ones  $\div$  5 = \_\_\_\_\_ ones

2.  $968 \div 4$

4	)	9	6	8
				0

Step 1

9 hundreds  $\div$  4  
= \_\_\_\_\_ hundreds with \_\_\_\_\_ hundred left over

Regroup the hundred.

\_\_\_\_\_ hundred = \_\_\_\_\_ tens

Add the tens.

\_\_\_\_\_ tens + 6 tens = \_\_\_\_\_ tens

Step 2

\_\_\_\_\_ tens  $\div$  4 = \_\_\_\_\_ tens

Step 3

8 ones  $\div$  4 = \_\_\_\_\_ ones

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3.  $858 \div 6$

**Step 1**

$$\begin{array}{r} \square \\ 6 \overline{) 858} \\ \square \square \square \\ \hline \square \end{array}$$

**Step 2**

$$\begin{array}{r} \square \\ 6 \overline{) 858} \\ \square \square \square \\ \hline \square \square \square \end{array}$$

**Step 3**

$$\begin{array}{r} \square \square \\ 6 \overline{) 858} \\ \square \square \square \\ \hline \square \square \square \\ \hline \square \end{array}$$

**Step 4**

$$\begin{array}{r} \square \square \\ 6 \overline{) 858} \\ \square \square \square \\ \hline \square \square \square \\ \hline \square \square \end{array}$$

**Step 5**

$$\begin{array}{r} \square \square \square \\ 6 \overline{) 858} \\ \square \square \square \\ \hline \square \square \square \\ \hline \square \square \\ \hline \square \square \\ \hline \square \end{array}$$

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Divide. Write the missing numbers.**

Example

$$276 \div 3 = ?$$

$$\begin{array}{r} \phantom{3} \overline{) 276} \\ \underline{270} \phantom{0} \\ \phantom{0} 6 \phantom{0} \\ \phantom{0} \underline{6} \phantom{0} \\ \phantom{00} 0 \end{array}$$

4.  $765 \div 9$

$$\begin{array}{r} \phantom{9} \overline{) 765} \\ \underline{\phantom{0} \phantom{0} \phantom{0}} \\ \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \underline{\phantom{0} \phantom{0}} \\ \phantom{00} \phantom{0} \end{array}$$

5.  $472 \div 8$

$$\begin{array}{r} \phantom{8} \overline{) 472} \\ \underline{\phantom{0} \phantom{0} \phantom{0}} \\ \phantom{0} \phantom{0} \phantom{0} \\ \phantom{0} \underline{\phantom{0} \phantom{0}} \\ \phantom{00} \phantom{0} \end{array}$$



Name: \_\_\_\_\_

Date: \_\_\_\_\_

6.  $903 \div 7$

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7	)	9	0	3
		<input type="text"/>	<input type="text"/>	<input type="text"/>
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		<input type="text"/>		

7.  $695 \div 5$

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5	)	6	9	5
		<input type="text"/>	<input type="text"/>	<input type="text"/>
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		<input type="text"/>		

8.  $578 \div 2$

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2	)	5	7	8
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		<input type="text"/>	<input type="text"/>	<input type="text"/>
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		<input type="text"/>		

9.  $867 \div 3$

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3	)	8	6	7
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Name: \_\_\_\_\_

Date: \_\_\_\_\_

10.  $984 \div 6$

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6	)	9	8	4
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		<input type="text"/>	<input type="text"/>	<input type="text"/>
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			<input type="text"/>	<input type="text"/>
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				<input type="text"/>

11.  $672 \div 4$

	<input type="text"/>	<input type="text"/>	<input type="text"/>	
4	)	6	7	2
		<input type="text"/>	<input type="text"/>	<input type="text"/>
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		<input type="text"/>	<input type="text"/>	<input type="text"/>
		<input type="text"/>	<input type="text"/>	<input type="text"/>
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## Worksheet 4 Dividing by a 1-Digit Number

Find each quotient.

Example

$$3,852 \div 3 = ?$$

Step 1

Divide 3 thousands by 3.  
3 thousands  $\div$  3 = 1 thousand  
= 1,000

$$\begin{array}{r} 1 \\ 3 \overline{) 3,852} \\ \underline{3,000} \end{array}$$

Step 2

Divide 8 hundreds by 3.  
8 hundreds  $\div$  3  
= 2 hundreds with 2 hundreds left over  
= 200 with 20 tens left over

$$\begin{array}{r} 1, 2 \\ 3 \overline{) 3,852} \\ \underline{3,000} \\ 852 \\ \underline{600} \\ 252 \\ \underline{200} \end{array}$$

Step 3

Divide 25 tens by 3.  
25 tens  $\div$  3  
= 8 tens with 1 ten left over  
= 80 with 10 ones left over

$$\begin{array}{r} 1, 2 8 \\ 3 \overline{) 3,852} \\ \underline{3,000} \\ 852 \\ \underline{600} \\ 252 \\ \underline{240} \\ 12 \end{array}$$

Step 4

Divide 12 ones by 3.  
12 ones  $\div$  3 = 4 ones

$$\text{So, } 3,852 \div 3 = \underline{1,284}.$$

$$\begin{array}{r} 1, 2 8 4 \\ 3 \overline{) 3,852} \\ \underline{3,000} \\ 852 \\ \underline{600} \\ 252 \\ \underline{240} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

A **quotient** is the answer to a division problem.

No remainder.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1.  $4,692 \div 4$

	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4)	4,	6	9	2
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	
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	<input type="text"/>			

2.  $7,326 \div 9$

	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9)	7,	3	2	6
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		<input type="text"/>	<input type="text"/>	
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**Find each quotient and remainder.**

Example

$8,162 \div 6 = ?$

$$\begin{array}{r} 1 \\ 6 \overline{) 8,162} \\ \underline{6,000} \\ 2 \end{array}$$

$1,000 \times 6 = 6,000$

$$\begin{array}{r} 13 \\ 6 \overline{) 8,162} \\ \underline{6,000} \\ 2,162 \\ \underline{1,800} \\ 362 \end{array}$$

$300 \times 6 = 1,800$

quotient

$$\begin{array}{r} 1,360 \\ 6 \overline{) 8,162} \\ \underline{6,000} \\ 2,162 \\ \underline{1,800} \\ 362 \\ \underline{360} \\ 2 \end{array}$$

remainder

$60 \times 6 = 300$

$8,162 \div 6 = \underline{1,360 R 2}$

3.  $5,687 \div 9$

	□ □ □ R □
9) 5, 6 8 7	
□ □ □ □	
□ □ □ □	
□ □ □ □	
□ □	
□ □	
□ □	

4.  $9,395 \div 7$

	□ □ □ □ R □
7) 9, 3 9 5	
□ □ □ □	
□ □ □ □	
□ □ □ □	
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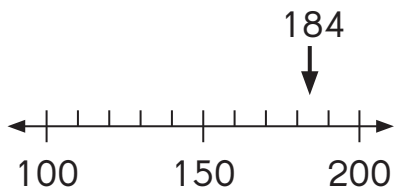
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**Estimate each quotient using related multiplication facts.**

*Example*

$$184 \div 5 = ?$$



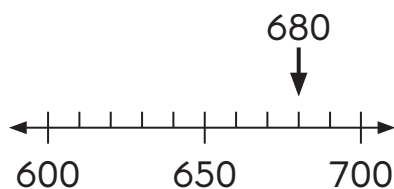
Related multiplication facts:

$$30 \times 5 = 150 \quad 40 \times 5 = 200$$

184 is closer to 200 than to 150.

So,  $184 \div 5$  is about  $200 \div 5 = \underline{40}$ .

**5.**  $680 \div 6$



$$110 \times 6 = \underline{\hspace{2cm}} \quad 120 \times 6 = \underline{\hspace{2cm}}$$

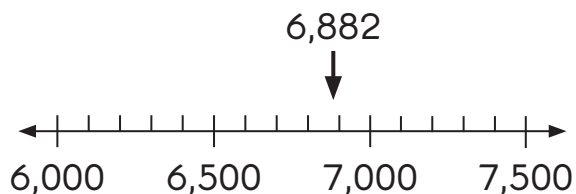
680 is closer to \_\_\_\_\_ than to \_\_\_\_\_.

So,  $680 \div 6$  is about \_\_\_\_\_  $\div 6 =$  \_\_\_\_\_.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

6.  $6,882 \div 8$



\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_    \_\_\_\_\_  $\times$  \_\_\_\_\_  
= \_\_\_\_\_

6,882 is closer to \_\_\_\_\_ than to \_\_\_\_\_.

So,  $6,882 \div 8$  is about \_\_\_\_\_  $\div 8 =$  \_\_\_\_\_.

**Divide. Then estimate to check whether your answer is reasonable.**

Example

$4,156 \div 6 = ?$

$$\begin{array}{r} 692 \text{ R } 4 \\ 6 \overline{) 4,156} \\ \underline{3,600} \phantom{0} \\ 556 \\ \underline{540} \phantom{0} \\ 16 \\ \underline{12} \\ 4 \end{array}$$

Estimate:

4,200  $\div 6 =$  700

$4,156 \div 6$  is about 700, so

the answer is reasonable.

$4,156 \div 6 =$  692 R 4

Name: \_\_\_\_\_

Date: \_\_\_\_\_

7.  $7,369 \div 5$

	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	R	<input type="text"/>
5)	7,	3	6	9		
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
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		<input type="text"/>	<input type="text"/>	<input type="text"/>		
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				<input type="text"/>		

Estimate:

\_\_\_\_\_  $\div$  5 = \_\_\_\_\_

$7,369 \div 5$  is about \_\_\_\_\_, so

the answer is \_\_\_\_\_.

8.  $6,750 \div 8$

	<input type="text"/>	<input type="text"/>	<input type="text"/>	R	<input type="text"/>	
8)	6,	7	5	0		
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
		<input type="text"/>	<input type="text"/>	<input type="text"/>		
		<input type="text"/>	<input type="text"/>	<input type="text"/>		
			<input type="text"/>	<input type="text"/>		
			<input type="text"/>	<input type="text"/>		
				<input type="text"/>		

Estimate:

\_\_\_\_\_  $\div$  8 = \_\_\_\_\_

$6,750 \div 8$  is about \_\_\_\_\_, so

the answer is \_\_\_\_\_.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Worksheet 5 Real-World Problems: Multiplication and Division

**Solve. Show your work.**

*Example*

Mr. Jack pays \$785 a month to rent an apartment.  
Ms. Jill pays \$1,075 a month to rent an apartment.  
How much rent do they pay in 12 months?

Step 1  $\$785 + \$1,075 = \$1,860$

Step 2  $12 \times \$1,860 = \$22,320$

They pay \$22,320 in 12 months.

1. Amos packs 298 boxes of pears each day.  
Kim packs 509 boxes each day.  
How many boxes of pears do they pack in 21 days?

Step 1

How many boxes of pears do they pack each day?

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Step 2

How many boxes of pears do they pack in 21 days?

\_\_\_\_\_  $\times$  21 = \_\_\_\_\_

They pack \_\_\_\_\_ boxes of pears in 21 days.

Name: \_\_\_\_\_

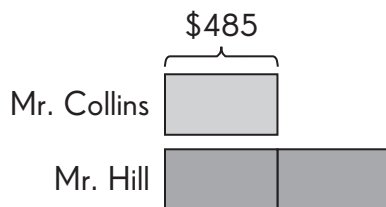
Date: \_\_\_\_\_

### Solve each problem using models.

Example

Mr. Collins saves \$485 a month.  
Mr. Hill saves twice as much as Mr. Collins.  
How much do they save in 12 months?

Step 1 How much does Mr. Hill save?



Mr. Hill saves  $\$485 \times 2 = \underline{\$970}$  a month.

Step 2 How much do they save in a month?

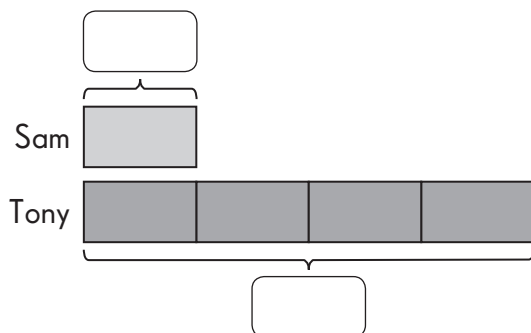
$$\$485 + \underline{\$970} = \underline{\$1,455}$$

Step 3 How much do they save in 12 months?

$$\$1,455 \times 12 = \underline{\$17,460}$$

2. Sam has 215 marbles. Tony has 4 times as many marbles as Sam.

Complete the model. Write the missing numbers.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

- a.** How many marbles does Tony have?

1 unit  $\rightarrow$  \_\_\_\_\_

4 units  $\rightarrow$  \_\_\_\_\_  $\times 4 =$  \_\_\_\_\_

Tony has \_\_\_\_\_ marbles.

- b.** Tony packs the marbles into boxes of 9 marbles each. How many full boxes does he have?

\_\_\_\_\_  $\div 9 =$  \_\_\_\_\_ R \_\_\_\_\_

He has \_\_\_\_\_ full boxes.

- c.** How many marbles are not packed in a full box?

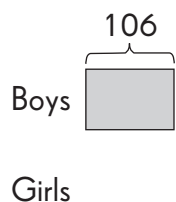
\_\_\_\_\_ marbles are not packed in a full box.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

- 3.** A school has 106 boys. There are 12 more girls than boys in the school.

Complete the model to show the number of girls.



- a.** How many students are there in the school?

There are \_\_\_\_\_ students in the school.

- b.** The school puts the children equally into 8 classes.  
How many students are there in each class?

There are \_\_\_\_\_ students in each class.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

4. Mr. Roberts has \$782 to buy one computer and 2 mobile phones. A computer costs twice as much as one mobile phone. He needs \$418 more to buy all the items.

Complete the model. Write the missing numbers.



- a. What is the total cost of all the items?

The total cost of all the items is \_\_\_\_\_.

- b. How much does the computer cost?

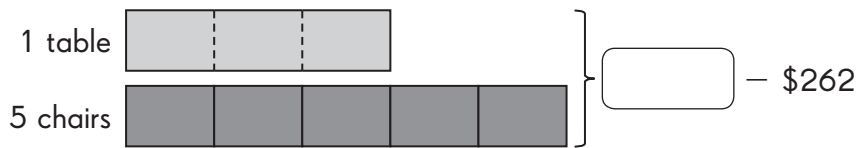
The computer costs \_\_\_\_\_.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

- 5.** Ms. Leslie has \$2,750 to spend on a table and 5 chairs. The table costs 3 times as much as one chair. After buying all the items she has \$262 left.

Complete the model. Write the missing numbers.



- a.** What is the total cost of all the items?

The total cost is \_\_\_\_\_.

- b.** What is the cost of the 5 chairs?

The 5 chairs cost \_\_\_\_\_.