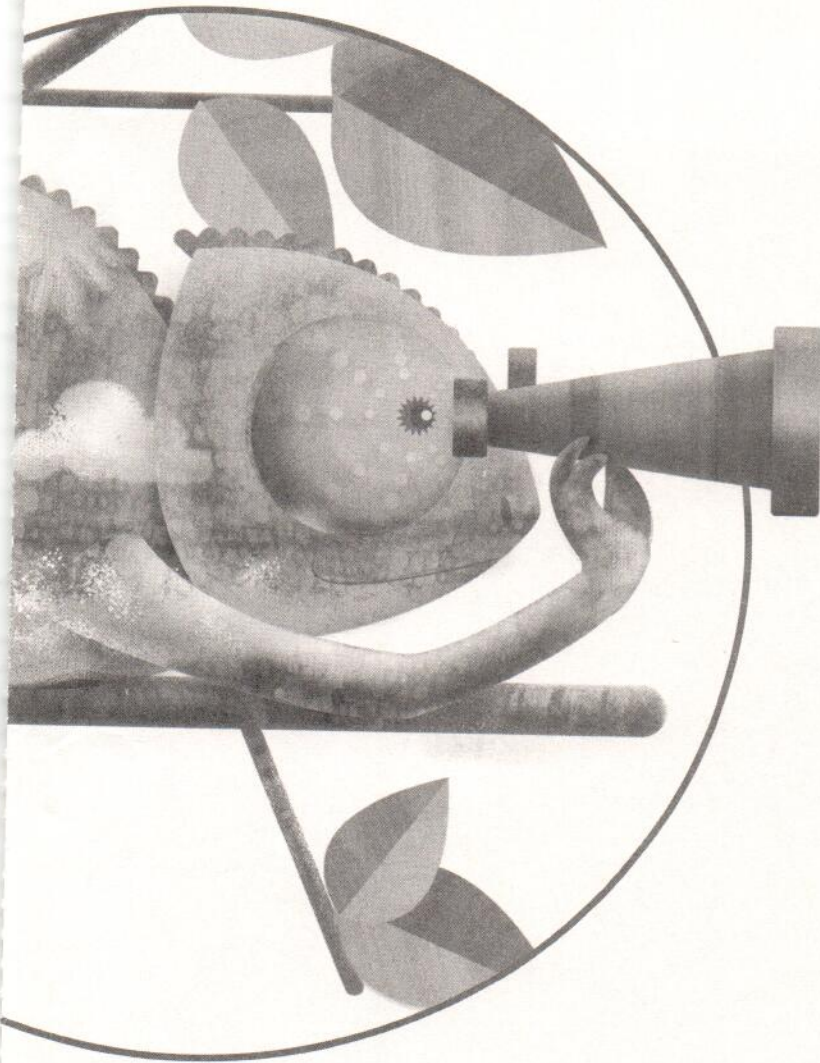


Interactive Homework Workbook

Grade 4



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en**Vision**MATH™
Scott Foresman • Addison Wesley

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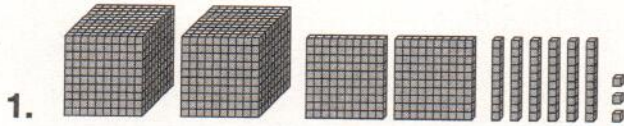
Name _____

Practice

1-1

Thousands

Write each number in standard form.



2. 8 ten thousands + 4 thousands +
9 hundreds + 4 tens + 7 ones

Write the word form and tell the value of the underlined digit for each number.

3. 76,239 _____

4. 823,774 _____

5. **Number Sense** Write the number that has 652 in the ones period and 739 in the thousands period. _____

During a weekend at the Movie Palace Theaters, 24,875 tickets were sold. Add the following to the number of tickets sold.

6. 100 tickets _____ 7. 1,000 tickets _____

8. Which of the following numbers has a 5 in the ten thousands place?

A 652,341 B 562,341 C 462,541 D 265,401

9. **Writing to Explain** Explain how you know the 6 in the number 364,021 is **NOT** in the thousands place.

Name _____

Practice

1-2

Millions

Write the number in standard form and in word form.

1. $300,000,000 + 70,000,000 + 2,000,000 + 500,000 + 10,000 + 2,000 + 800 + 5$

Write the word form and tell the value of the underlined digit for each number.

2. 4,600,028 _____

3. 488,423,046 _____

4. **Number Sense** Write the number that is one hundred million more than 15,146,481. _____

5. The population of Peru in 2006 was estimated to be 28,302,603. Write the word form.

6. Which is the expanded form for 43,287,005?

A $4,000,000 + 300,000 + 20,000 + 8,000 + 700 + 5$

B $40,000,000 + 3,000,000 + 200,000 + 80,000 + 7,000 + 5$

C $400,000,000 + 30,000,000 + 2,000,000 + 8,000 + 500$

D $4,000,000 + 30,000 + 2,000 + 800 + 70 + 5$

7. **Writing to Explain** In the number 463,211,889, which digit has the greatest value? Explain.

Comparing and Ordering Whole Numbers

Compare. Write $>$ or $<$ for each \bigcirc .

1. 2,854,376 \bigcirc 2,845,763

2. 6,789 \bigcirc 9,876

3. 59,635 \bigcirc 59,536

4. 29,374,125 \bigcirc 30,743,225

Order the numbers from least to greatest.

5. 45,859,211 4,936,211 43,958,211

6. **Number Sense** Write three numbers that are greater than 1,543,000 but less than 1,544,000.

7. Put the planets in order from the one closest to the sun to the one farthest from the sun.

The Five Closest Planets to the Sun

Planet	Distance (miles)
Earth	93,000,000
Jupiter	483,000,000
Mars	142,000,000
Mercury	36,000,000
Venus	67,000,000

8. Which number has the greatest value?

A 86,543,712

B 82,691,111

C 85,381,211

D 86,239,121

9. **Writing to Explain** Tell how you could use a number line to determine which of two numbers is greater.

Name _____

Rounding Whole Numbers

Round each number to the nearest ten.

1. 16,326

2. 412,825

3. 6,512,162

4. 42,084,097

Round each number to the nearest hundred.

5. 1,427

6. 68,136

7. 271,308

8. 7,593,656

Round each number to the nearest thousand.

9. 18,366

10. 409,614

11. 48,229,930

12. 694,563,239

Round each number to the underlined place.

13. 12,108

14. 570,274

15. 9,333,625

16. 534,307,164

17. What is 681,542 rounded to the nearest hundred thousand?

A 600,000

B 680,000

C 700,000

D 780,000

18. **Writing to Explain** Mrs. Kennedy is buying pencils for each of 315 students at Hamilton Elementary. The pencils are sold in boxes of tens. How can she use rounding to decide how many pencils to buy?

Using Money to Understand Decimals

1. $2.18 =$ _____ ones $+$ _____ tenth $+$ _____ hundredths

$\$2.18 =$ _____ dollars $+$ _____ dime $+$ _____ pennies

2. $9.27 =$ _____ ones $+$ _____ hundredths

$\$9.27 =$ _____ dollars $+$ _____ pennies

3. $7.39 =$ _____ ones $+$ _____ tenths $+$ _____ hundredths

$\$7.39 =$ _____ dollars $+$ _____ dimes $+$ _____ pennies

4. **Number Sense** Write 3 dollars, 9 dimes, and 5 pennies with a dollar sign and decimal point.

5. **Number Sense** If you have 5 tenths of a dollar, how much money do you have?

6. Lana wants to buy a book for $\$6.95$. How can she pay for the book using only dollars, dimes, and nickels?

7. How would you write sixteen and twenty-five hundredths with a decimal point?

A 16.025

B 16.25

C 162.5

D 1,625

8. **Writing to Explain** Which is greater, 4 tenths and 2 hundredths or 2 tenths and 4 hundredths? Explain.

Counting Money and Making Change

For Exercises 1 through 8, find the change from a \$10 bill.

1. \$6.35 _____ 2. \$1.28 _____ 3. \$9.01 _____ 4. \$3.11 _____
 5. \$8.88 _____ 6. \$7.70 _____ 7. \$0.37 _____ 8. \$4.56 _____

For Exercises 9 through 12, find each amount of money.



9. _____ 10. _____ 11. _____ 12. _____

13. Veronica buys a dress for \$45.99. She can pay with a \$50 bill. What is the amount of money Veronica received in change?

14. Linda spent \$6.64, including tax, on a pair of socks. She paid with a \$10 bill. What is the fewest number of coins that she might get back in change?

- A 3 B 5 C 8 D 9

15. **Writing to Explain** Mike's bill for stamps comes out to \$19.35. He paid with a \$20 bill. He got 8 coins back as change. Is this possible? Explain.

Name _____

Problem Solving: Make an Organized List

Make an organized list to solve each problem. Write each answer in a complete sentence.

1. Tonya and Lauren are designing a soccer uniform. They want to use two colors on the shirt. Their choices are green, orange, yellow, purple, blue, and silver. How many ways can they choose two colors?

2. Yancey collects plastic banks. He has three different banks: a pig, a cow, and a horse. How many ways can Yancey arrange his banks on a shelf?

3. Kevin has a rabbit, a ferret, a gerbil, and a turtle. He feeds them in a different order each day. In how many different orders can Kevin feed his pets?

Using Mental Math to Add and Subtract

Add or subtract. Use mental math.

1. $89 + 46$

2. $101 - 49$

3. $400 + 157$

4. $722 + 158$

5. $120 - 33$

6. $900 - 187$

7. $299 + 206$

8. $878 + 534$

9. $554 - 59$

10. **Reasoning** How can you write $52 + (8 + 25)$ to make it easier to add? _____

11. Selena's family went on a trip. The total hotel bill was \$659. The cost of the airfare was \$633. Use mental math to find the total cost for the hotel and the airfare. _____

12. One year, 76 people helped at the town cleanup. The next year, 302 people helped. How many more people helped in the second year? Use mental math to find the answer. _____

13. Stanley wants to collect 900 sports cards. So far, he has collected 428 baseball cards and 217 football cards. How many more cards does Stanley need to complete his collection?

A 255

B 472

C 645

D 683

14. **Writing to Explain** Explain how you could add $678 + 303$ using mental math.

Estimating Sums and Differences of Whole Numbers

Estimate each sum or difference.

1.
$$\begin{array}{r} 627 \\ + 95 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 829 \\ - 292 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 987 \\ - 233 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 1,568 \\ + 352 \\ \hline \end{array}$$

5. $4,263 - 1,613$ _____

6. $7,502 + 2,187$ _____

7. $24,141 - 2,177$

8. $64,099 - 55,555$

9. $83,595 + 18,999$

10. About how much larger is the largest ocean than the smallest ocean?

Ocean Area

Ocean	Area (million sq km)
Arctic Ocean	14,056
Atlantic Ocean	76,762
Indian Ocean	68,556
Pacific Ocean	155,557

11. About how many million square kilometers do all the oceans together cover?

12. Mallory is a pilot. Last week she flew the following round trips in miles: 2,020; 1,358; 952; 2,258; and 1,888. Which of the following is a good estimate of the miles Mallory flew last week?

A 6,000 mi

B 6,800 mi

C 7,000 mi

D 8,000 mi

13. **Writing to Explain** Explain how you would estimate to subtract 189 from 643.

Adding Whole Numbers

Add.

$$\begin{array}{r} 1. \quad 486 \\ \quad 875 \\ + \quad 45 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 4,334 \\ \quad 4,948 \\ + \quad 890 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 938 \\ \quad 1,487 \\ + \quad 8,947 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 7,226 \\ \quad 1,587 \\ + \quad 72,984 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 54,236 \\ \quad 223 \\ + \quad 7,856 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 80 \\ \quad 960 \\ \quad 4 \\ + \quad 1,986 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 27,987 \\ \quad 2,096 \\ \quad 15,098 \\ + \quad 7,945 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 8,738 \\ \quad 5,234 \\ \quad 836 \\ + \quad 237 \\ \hline \end{array}$$

9. **Number Sense** Luke added $429 + 699 + 314$ and got 950. Is this sum reasonable?

10. What is the combined length of the three longest glaciers?

World's Longest Glaciers

Glacier	Length (miles)
Lambert-Fisher Ice Passage	320
Novaya Zemlya	260
Arctic Institute Ice Passage	225
Nimrod-Lennox-King	180

11. What is the total combined length of the four longest glaciers in the world?

12. Which is the sum of $3,774 + 8,276 + 102$?

A 1,251

B 12,152

C 13,052

D 102,152

13. **Writing to Explain** Leona added $6,641 + 1,482 + 9,879$. Should her answer be more than or less than 15,000?

Subtracting Whole Numbers

Subtract.

1.
$$\begin{array}{r} 7,242 \\ - 158 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 520 \\ - 203 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 848 \\ - 257 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6,797 \\ - 1,298 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 753 \\ - 218 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 7,392 \\ - 4,597 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 3,898 \\ - 1,299 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 3,721 \\ - 459 \\ \hline \end{array}$$

9. $3,328 - 1,754$

10. $9,333 - 1,555$

11. $6,797 - 1,298$

12. Which of the following best describes the answer to the subtraction problem below?

$$3,775 - 1,831$$

- A The answer is less than 1,000.
- B The answer is about 1,000.
- C The answer is greater than 1,000.
- D You cannot tell from the information given.
13. **Writing to Explain** The Environmental Club's goal is to collect 1,525 cans by the end of the summer. The number of cans they collected each week is shown in the table below. How can you find the number of cans they need to collect in week 4 to meet their goal?

Week Number	Number of cans collected
1	378
2	521
3	339
4	

Name _____

Practice

2-6

Subtracting Across Zeros

Subtract.

1.
$$\begin{array}{r} 906 \\ - 45 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3,091 \\ - 1,361 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 4,000 \\ - 2,557 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 800 \\ - 139 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 1,070 \\ - 593 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 8,904 \\ - 3,596 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 3,007 \\ - 2,366 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 523 \\ - 203 \\ \hline \end{array}$$

9. $7,403 - 3,254$

10. $5,067 - 2,987$

11. $6,790 - 1,298$

12. Robert set a goal to swim 1,000 laps in the local swimming pool during his summer break. Robert has currently finished 642 laps. How many more laps does he have to swim in order to meet his goal?

A 332

B 358

C 468

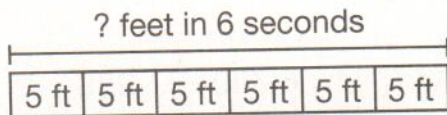
D 472

13. **Writing to Explain** If $694 - 72 = \underline{\hspace{2cm}}$, then $622 + \underline{\hspace{2cm}} = 694$. Explain the process of checking your work.

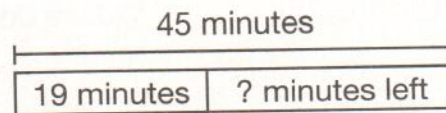
Problem Solving: Draw a Picture and Write an Equation

For exercises 1 through 4 write an equation and solve. Use the picture to help you.

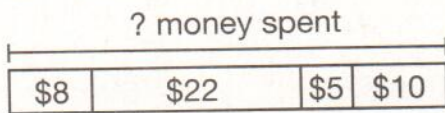
1. A remote control car has a speed of 5 feet per second. How many feet will the car travel in 6 seconds?



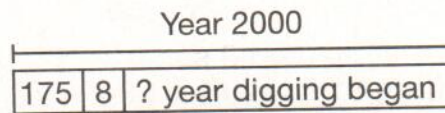
2. Danny has 45 minutes to take a math test. If Danny finishes half the test in 19 minutes, how many minutes does he have left to finish it?



3. While shopping, Janet bought a shirt for \$8, a pair of jeans for \$22, mittens for \$5, and a hat for \$10. How much money did Janet spend?



4. The 175th anniversary of the completion of the Erie Canal was in the year 2000. If it took 8 years to dig the canal, in what year did the digging of the Erie Canal begin?



5. The average length of a song on a certain CD is 3 minutes. The CD has 12 songs. Write an equation for the length of the whole CD. Draw a picture to help you.

A 12×3

B $12 + 3$

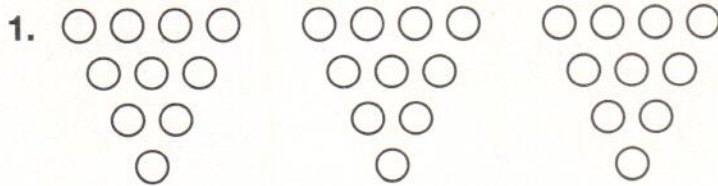
C $12 \div 3$

D $12 - 3$

6. **Writing to Explain** It takes Jinny 56 minutes to drive to her friend's house. She drove 15 minutes and then stopped at a store. She then drove another 10 minutes. What do you need to do to find the amount of time she has left to drive?

Meanings of Multiplication

Write an addition sentence and a multiplication sentence for the picture.



Write a multiplication sentence for each addition sentence.

2. $4 + 4 + 4 + 4 = 16$ _____

3. $10 + 10 + 10 + 10 + 10 + 10 = 60$ _____

4. **Number Sense** How could you use multiplication to find $7 + 7 + 7$?

5. A classroom desk has 4 legs. How many legs do 5 desks have altogether? _____

6. Danielle planted 3 seeds in 6 different pots. How many seeds did she plant? _____

7. Which is the multiplication sentence for $2 + 2 + 2 + 2$?
A $4 \times 4 = 16$ **B** $2 \times 2 = 4$ **C** $4 \times 2 = 8$ **D** $2 \times 6 = 12$

8. **Writing to Explain** Explain how you can use multiplication to find $2 + 2 + 2 + 2$.

Name _____

Patterns for Facts

1.
$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

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

3.
$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

9. $9 \times 6 =$ _____

10. $2 \times 7 =$ _____

11. $5 \times 5 =$ _____

Algebra Find the missing number.

12. _____ $\times 9 = 45$

13. $2 \times$ _____ $= 14$

14. A package of baseball cards includes 5 cards. How many baseball cards are in 5 packages?

15. What is the value of the missing number?

$9 \times \square = 36$

A 6

B 4

C 3

D 2

16. **Writing to Explain** Milton needs to find the product of two numbers. One of the numbers is 9. The answer also needs to be 9. How will he solve this problem? Explain.

Name _____

Practice

3-3

Multiplication Properties

1.
$$\begin{array}{r} 0 \\ \times 4 \\ \hline \end{array}$$

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

3.
$$\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 3 \\ \times 0 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 6 \\ \times 0 \\ \hline \end{array}$$

9. $1 \times 1 =$ _____

10. $9 \times 0 =$ _____

11. $0 \times 0 =$ _____

Algebra Find the missing number.

12. _____ $\times 9 = 0$

13. $1 \times$ _____ $= 4$

14. Ray has 4 boxes with 5 pens in each box. Kevin has 5 boxes with 4 pens in each. Who has more pens?

15. Which property can help you find the missing number? _____ $\times 9 = 0$

16. **Writing to Explain** Steve needs to find the product of two numbers. One of the numbers is 6. The answer also needs to be 6. How will you solve this problem? Explain.

3 and 4 as Factors

Use breaking apart to find each product.

1.
$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$$

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

4.
$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

5. $4 \times 5 =$ _____

6. $3 \times 9 =$ _____

7. $3 \times 5 =$ _____

8. $3 \times 6 =$ _____

9. $4 \times 7 =$ _____

10. $3 \times 8 =$ _____

11. **Number Sense** Sara traced circle stencils for her project. She needs 4 rows of 6 circle stencils. She thought that 4 rows of 6 is the same as 3 rows of 8 and 2 rows of 8. Is this correct? Explain.

12. Which of the following is equal to the product of 3×3 ?

A 9×1

B 3×1

C 4×2

D 6×3

13. **Writing to Explain** Explain how the three multiplication sentences are related.

2×12

3×8

4×6

6, 7, and 8 as Factors

Use breaking apart to find each product.

1.
$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

5. $6 \times 3 = \underline{\quad}$

6. $8 \times 3 = \underline{\quad}$

7. $7 \times 5 = \underline{\quad}$

8. $6 \times 6 = \underline{\quad}$

9. $6 \times 7 = \underline{\quad}$

10. $7 \times 9 = \underline{\quad}$

11. **Number Sense** Meghan planted seeds for her project. She needs 7 rows of 9 seeds. She thought that 7 rows of 9 is the same as 3 rows of 9 and 2 rows of 9. Is this correct?

12. Which of the following is equal to the product of 8×3 ?

A 7×4

B 6×4

C 6×2

D 8×2

13. **Writing to Explain** Explain how the three multiplication sentences are related.

6×2

4×3

12×1

Name _____

Practice

3-6

10, 11, and 12 as Factors

1. $4 \times 10 =$ _____ 2. $12 \times 2 =$ _____ 3. $10 \times 6 =$ _____

4. $11 \times 1 =$ _____ 5. $4 \times 12 =$ _____ 6. $8 \times 11 =$ _____

7. $9 \times 10 =$ _____ 8. $12 \times 3 =$ _____ 9. $10 \times 7 =$ _____

10. $11 \times 5 =$ _____ 11. $10 \times 5 =$ _____ 12. $6 \times 12 =$ _____

13. **Number Sense** Beatrice multiplied 10×9 . She quickly found the answer by placing a 0 behind the 9 to get an answer of 90. Is this reasonable?

There are 12 months in 1 year. How many months are in

14. 2 years? _____

15. 3 years? _____

16. 5 years? _____

17. In the classroom there are 5 round tables. There are 4 students sitting at each table. How many students are sitting at the tables altogether? _____

18. How much money is 12 dimes?

A \$0.60

B \$1.00

C \$1.20

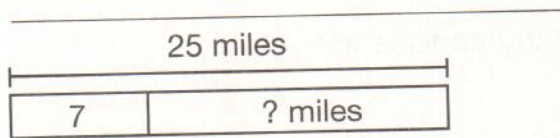
D \$2.00

19. **Writing to Explain** Explain how to find 7×11 .

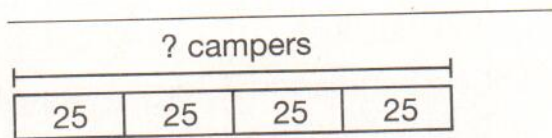
Problem Solving: Draw a Picture and Write an Equation

For 1 through 4, write an equation and solve. Use the picture to help.

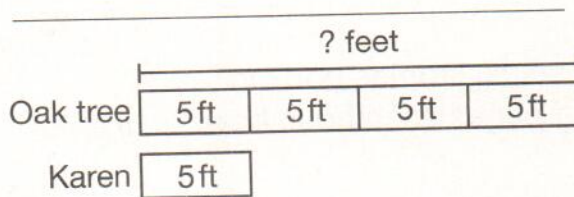
1. John is running in a marathon. The marathon is 25 miles long. After two hours, John has run 7 miles. How many miles does John have left to run?



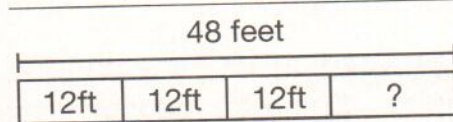
2. A summer camp has divided its campers into 4 groups of 25 campers. How many campers are at the summer camp?



3. Karen is 5 feet tall. In Karen's backyard there is an oak tree 4 times as tall as she is. How tall is the oak tree?



4. Micah's room has four sides and a perimeter of 48 feet. If 3 of the sides are 12 feet long, how long is the fourth side?



5. On Monday, Chris had \$250 in his savings account. On Friday, he spent \$16 at the movies. On Saturday, he deposited a \$120 check. Which number sentence below shows how much money Chris has?

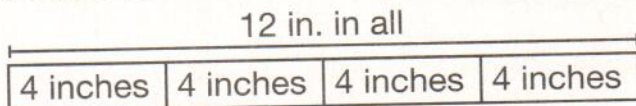
A $250 + 16 + 120$

C $250 - 16 - 120$

B $250 + 16 - 120$

D $250 - 16 + 120$

6. **Writing to Explain** Melissa is making bookmarks from a piece of ribbon that is 12 inches long. Each bookmark is 4 inches long. She drew this picture to see how many bookmarks she could make from the ribbon. What did she do wrong?



Meanings of Division

Draw pictures to solve each problem.

1. There are 12 small gift bags. Each bag can hold 1 toy and some stickers. There are 36 stickers. If an equal number of stickers is put in each bag, how many stickers will be in each bag?

2. One egg carton holds 12 eggs. How many cartons are you able to fill with 60 eggs?

3. There are 21 students in Mr. Tentler's class. The students divided themselves evenly into 3 groups. How many students are in each group? _____

4. Calvin read an 18-page chapter in his social studies book in 2 hours. If he read the same number of pages each hour, how many pages did he read per hour?

- A 3 pages B 6 pages C 9 pages D 12 pages

5. **Writing to Explain** The class is planning a party. The pizza restaurant cuts each pizza into 8 slices. There are 32 students. How many pizzas does the class need to order for each student to have one slice? Explain.

Name _____

Relating Multiplication and Division

Complete each fact family.

1. $7 \times \underline{\quad} = 42$

$\underline{\quad} \times \underline{\quad} = 42$

$42 \div 6 = \underline{\quad}$

$42 \div \underline{\quad} = \underline{\quad}$

2. $9 \times \underline{\quad} = 36$

$\underline{\quad} \times \underline{\quad} = 36$

$36 \div 4 = \underline{\quad}$

$36 \div \underline{\quad} = \underline{\quad}$

Write a fact family for each set of numbers.

3. 6, 3, 18

4. 5, 5, 25

5. **Reasoning** Why does the fact family for 81 and 9 have only two number sentences?

6. Which number sentence completes the fact family?

$9 \times 6 = 54$ $54 \div 9 = 6$ $54 \div 6 = 9$

- A** $9 \times 9 = 81$ **B** $6 \times 9 = 54$ **C** $6 \times 6 = 36$ **D** $8 \times 6 = 48$

7. **Writing to Explain** Find two ways to divide 16 evenly. Explain.

Name _____

Practice

4-3

Special Quotients

1. $0 \div 10 =$ _____ 2. $7 \div 1 =$ _____ 3. $8 \div 8 =$ _____

4. $9 \div 9 =$ _____ 5. $0 \div 5 =$ _____ 6. $5 \div 1 =$ _____

7. $1 \overline{)4}$ _____ 8. $8 \overline{)0}$ _____ 9. $3 \overline{)3}$ _____ 10. $1 \overline{)6}$ _____

11. **Number Sense** If $x \div 9 = 1$, how do you know what x is? Explain.

12. Kenneth has 22 math problems to do for homework. He has 12 problems done. How many more problems does he have left? If he completes 1 problem every minute, how many more minutes does he have to work?

13. There are 8 people who would like to share a box of granola bars that contains 8 bars. How many granola bars does each person get if they share equally?

14. Which is the quotient of $20 \div 20$?

A 20

B 2

C 1

D 0

15. **Writing to Explain** Write a rule for the following number sentence: $0 \div 7 = 0$.

Name _____

Using Multiplication Facts to Find Division Facts

Solve.

1. $12 \div 3 =$ _____

2. $20 \div 5 =$ _____

3. $50 \div 10 =$ _____

4. $27 \div 9 =$ _____

5. $6 \div 2 =$ _____

6. $16 \div 8 =$ _____

7. $63 \div 9 =$ _____

8. $36 \div 4 =$ _____

9. $48 \div 6 =$ _____

10. $32 \div 8 =$ _____

11. $25 \div 5 =$ _____

12. $18 \div 2 =$ _____

Use the data in the table to write a multiplication story for the number fact. Solve.

First Aid Kit	
Supply	Number in Kit
Bandages	4
Cleanser Pads	6
Cotton Balls	12

13. $2 \times 6 =$

14. Which is the quotient of $28 \div 7$?

A 14

B 9

C 6

D 4

15. **Writing to Explain** Write a division story for 12 and 3.

Problem Solving: Draw a Picture and Write an Equation

1. Terrence has 16 trophies and he wants to put an equal number on 4 shelves. How many trophies will he have on each shelf?

2. Jody is making a sculpture of her dog. If the sculpture is 6 inches long and her dog is 7 times as long as the sculpture, how long is Jody's dog?

3. Lisa has 45 megabytes of space left on her flash drive. She has 5 files that are the same size that will fill up the space. How many megabytes is each file?

4. A store is displaying boxes of a new video game in 7 rows. If the store has 49 copies of the game how many games are in each row?

5. Mrs. Lopez is 54 and has a daughter who is six years more than a third of her age. Draw a picture to help find which expression below shows how old Mrs. Lopez's daughter is.

A $54 + 6 \div 3$ **B** $54 \div 3 + 6$ **C** $54 \div 6 + 3$ **D** $54 + 3 \div 6$

6. **Writing to Explain** Jillian wants to organize her CD collection into wooden crates. Each crate holds 8 CDs. Jillian has 48 CDs. How can she use a picture to figure out how many crates she needs?

Name _____

Multiplying by Multiples of 10 and 100

Find each product. Use mental math.

1. $6 \times 70 =$ _____

2. $80 \times 2 =$ _____

3. $40 \times 9 =$ _____

4. $10 \times 3 =$ _____

5. $4 \times 500 =$ _____

6. $300 \times 9 =$ _____

7. $8 \times 600 =$ _____

8. $7 \times 400 =$ _____

9. $6 \times 200 =$ _____

10. $800 \times 5 =$ _____

11. $6 \times 800 =$ _____

12. $400 \times 3 =$ _____

13. **Number Sense** How many zeros will the product of 7×500 have? _____

Mr. Young has 30 times as many pencils as Jack. The whole school has 200 times as many pencils as Jack. If Jack has 2 pencils, how many pencils does

14. Mr. Young have?

15. the whole school have?

16. Find 3×100 .

A 30

B 300

C 3,000

D 30,000

17. **Writing to Explain** Wendi says that the product of 5×400 will have 2 zeros. Is she correct? Explain.

Name _____

Practice

5-2

Using Mental Math to Multiply

Use compatible numbers to find each product.

1. $34 \times 4 =$ _____ 2. $53 \times 7 =$ _____ 3. $41 \times 6 =$ _____
4. $76 \times 5 =$ _____ 5. $83 \times 3 =$ _____ 6. $28 \times 8 =$ _____
7. $94 \times 2 =$ _____ 8. $16 \times 4 =$ _____ 9. $46 \times 5 =$ _____

Use breaking apart to find each product.

10. $15 \times 6 =$ _____ 11. $95 \times 4 =$ _____ 12. $29 \times 6 =$ _____
13. $83 \times 7 =$ _____ 14. $36 \times 2 =$ _____ 15. $79 \times 4 =$ _____
16. $42 \times 8 =$ _____ 17. $17 \times 5 =$ _____ 18. $86 \times 9 =$ _____

19. **Reasonableness** Quinn used breaking apart to find the product of 37×4 . Her answer was 124. What did she do incorrectly?

20. Davidson's Bakery uses 9 dozen eggs to make cookies each day. How many eggs do they use?

A 90 **B** 98 **C** 108 **D** 112

21. **Writing to Explain** Find the product of 53×6 . Explain how you found the product.

Name _____

Practice

5-3

Using Rounding to Estimate

Estimate each product.

1. 38×2 _____

2. 7×47 _____

3. 54×6 _____

4. 121×2 _____

5. 548×8 _____

6. 823×3 _____

7. 7×289 _____

8. 183×4 _____

9. 2×87 _____

10. 673×8 _____

The distance between San Francisco, California, and Salt Lake City, Utah, is 752 miles.

11. About how many miles would a car drive if it made 4 one-way trips? 12. About how many miles would a car drive if it made 9 one-way trips?

13. Vera has 8 boxes of paper clips. Each box has 275 paper clips. About how many paper clips does Vera have?

A 240

B 1,600

C 2,400

D 24,000

14. **Writing to Explain** A large 7-story office building has 116 windows on each floor. About how many windows does the building have in all?

Problem Solving: Reasonableness

For **1** and **2**, use reasonableness to decide if each answer is correct. Explain why the answer is reasonable or not. If the answer is incorrect, give the correct answer.

1. Johan is selling baseball cards for 10¢ each. He is selling 8 cards and says he'll make \$8.

2. Erika is bringing cupcakes to her class. Her class sits in 4 rows of 7, so Erika estimates she'll need 35 cupcakes.

Julia is planting sunflowers. Use the table to the right to solve **3** through **5**.

Weeks	Height in inches
1	16
2	32
3	48
4	64
5	

3. How large will the sunflower be after the 5th week?

4. Viktor divided 63 by 7 and said his answer is 10. Which statement below shows why his answer is **NOT** reasonable?

A Viktor subtracted

C Viktor estimated, he didn't solve

B Viktor answered the wrong question

D Viktor is correct

5. **Writing to Explain** The world's largest sunflower was about 300 inches tall. Julia says her sunflower will be that tall in 10 weeks because after 2 weeks her sunflower was 32 inches and $32 \times 10 = 320$. Is Julia correct? If not, what did she do wrong?


Using an Expanded Algorithm

Use the array to find the partial products. Add the partial products to find the product.

1.
$$\begin{array}{r} 42 \\ \times 8 \\ \hline \end{array}$$


2.
$$\begin{array}{r} 39 \\ \times 7 \\ \hline \end{array}$$


3.
$$\begin{array}{r} 21 \\ \times 4 \\ \hline \end{array}$$


4.
$$\begin{array}{r} 37 \\ \times 4 \\ \hline \end{array}$$


5. $7 \times 14 =$ _____

6. $3 \times 52 =$ _____

7. $4 \times 42 =$ _____

8. $5 \times 26 =$ _____

9. $6 \times 62 =$ _____

10. $9 \times 76 =$ _____

11. Alex can type 72 words per minute. How many words can Alex type in 5 minutes? _____

12. Find 8×44 .

A 282

B 312

C 352

D 372

13. **Writing to Explain** Explain how you can use an array to find partial products for 4×36 .

Multiplying 2-Digit by 1-Digit Numbers

Find each product. Decide if your answer is reasonable.

1.
$$\begin{array}{r} 19 \\ \times 4 \\ \hline 7 \square \end{array}$$

2.
$$\begin{array}{r} 23 \\ \times 7 \\ \hline \square 6 \square \end{array}$$

3.
$$\begin{array}{r} 51 \\ \times 6 \\ \hline \square 0 \square \end{array}$$

4.
$$\begin{array}{r} 39 \\ \times 7 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 48 \\ \times 5 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 53 \\ \times 7 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 29 \\ \times 8 \\ \hline \end{array}$$

8. $42 \times 6 =$ _____

9. $89 \times 8 =$ _____

10. $77 \times 9 =$ _____

11. $94 \times 4 =$ _____

12. **Number Sense** Penny says that $4 \times 65 = 260$. Estimate to check Penny's answer. Is she right? Explain.

13. A large dump truck uses about 18 gallons of fuel in 1 hour of work. How many gallons of fuel are needed if the truck works for 5 hours? _____

14. Which of the following is a reasonable estimate for 6×82 ?

A 48

B 480

C 540

D 550

15. **Writing to Explain** Tyrone has 6 times as many marbles as his sister Pam. Pam has 34 marbles. Louis has 202 marbles. Who has more marbles, Tyrone or Louis? Explain how you found your answer.

Multiplying 3-Digit by 1-Digit Numbers

Find each product. Estimate for reasonableness.

1.
$$\begin{array}{r} 352 \\ \times 3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 385 \\ \times 4 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 482 \\ \times 8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 632 \\ \times 5 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 219 \\ \times 6 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 768 \\ \times 7 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 521 \\ \times 4 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 848 \\ \times 9 \\ \hline \end{array}$$

9. $7 \times 211 =$ _____

10. $6 \times 517 =$ _____

If the baseball players in the table score the same number of runs each season, how many runs will

Runs Scored in 2001

Player	Runs Scored
A	128
B	113
C	142

11. Player A score in 5 seasons?

12. Player C score in 8 seasons?

13. How many bottles of water would Tim sell if he sold 212 bottles each week for 4 weeks?

A 800

B 840

C 848

D 884

14. **Writing to Explain** If you know that $8 \times 300 = 2,400$, how can you find 8×320 ? Explain.

Name _____

Practice

5-8

Problem Solving: Draw a Picture and Write an Equation

Draw a picture to show the main idea. Then choose an operation and solve the problem.

1. A sack of potatoes weighs 20 lb and holds 200 potatoes. A sack of apples weighs 20 lb and holds 325 apples. How many more apples are there in a 20 lb sack?

2. Shawna has 35 football cards and 5 times as many baseball cards in her sports-card collection. How many baseball cards does she have?

3. A picture frame costs \$8. How much will 4 frames cost?

4. The first modern electronic computer, called ENIAC, was introduced in 1946. Personal home computers were not available until 28 years later. In what year were personal home computers introduced?

Variables and Expressions

Copy and complete the table.

	k	$k \times 7$
1.	5	$5 \times 7 = \square$
2.	9	$9 \times 7 = \square$
3.	11	$\square \times 7 = 77$
4.	13	$\square \times 7 = 91$

Complete the table for each problem.

5.

x	60	72	42	36
$x \div 6$	10	12	7	

6.

b	14	18	23	27
$b + 9$		27	32	36

7.

z	5	8	10	12
$z \times 8$	40		80	96

8.

y	57	44	31	26
$y - 4$	53	40		22

9. When $c = 4$, what is the value of the expression $72 \div c$?

A 18

B 20

C 24

D 28

10. **Writing to Explain** Explain how you could show five less than a number using an expression.

Addition and Subtraction Expressions

Find a rule and write the missing number for each table.

1.

r	19	24	32	37
	7	12	20	

2.

a	6	9	12	15
	40		46	49

3.

s	10	15	25	30
	5	10		25

4.

b	16	19	22	26
		35	38	42

5.

w	3	6	9	12
	6		12	15

6.

n	51	42	33	24
	40	31		13

7. Evaluate the expression $15 - n$ when $n = 9$. _____

8. Which expression stands for "32 more than a number d "?

A $32 \times d$

B $32 - d$

C $32 + d$

D $32 \div d$

9. **Writing to Explain** Explain how you know to use a variable in an addition or subtraction expression.

Multiplication and Division Expressions

Find a rule and write the missing number for each table.

1.

<i>m</i>	6	7	8	9
	54	63		81

2.

<i>k</i>	14	21	49	77
	2	3		11

3.

<i>z</i>	54	48	39	30
	18		13	10

4.

<i>q</i>	2	3	4	5
	38	57	76	

5.

<i>e</i>	5	7	9	11
		42	54	66

6.

<i>l</i>	96	72	48	36
	8	6	4	

7. Evaluate the expression $48 \div n$ when $n = 6$. _____

8. Which expression means "3 times a number h "?

A $3 \times h$

B $3 - h$

C $3 + h$

D $3 \div h$

9. **Writing to Explain** How could you show the inverse operation of Exercise 5 above?

Problem Solving: Use Objects and Reasoning

1. Use the numbers 5 through 9 to fill the spaces in the square. Each row and column must have a sum of 15.

	1	
3		
4		2

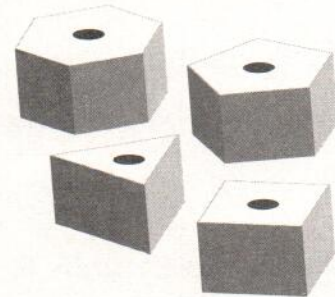
2. An, Larissa, Sue, and Jen are sitting in a line in a roller coaster. Larissa is sitting right in front of An. Sue is sitting right behind Jen. Jen is not sitting in the front seat. In what order are the girls sitting?



3. What number am I? _____

- My tens digit is 3 more than my thousands digit.
- My ones digit is 2 times my hundreds digit.
- My tens digit is 4 times my hundreds digit.
- My tens digit is 1 more than 7.

4. Jay made a bracelet in art class using beads. He used the four beads on the right. Use the clues to guess what the pattern was.



- The square bead is next to the triangle.
- The hexagon is not next to the pentagon.
- No two beads with an even number of sides are next to each other.
- The last bead is the pentagon.

5. Mark is making a tile design to cover a rectangle. So far, he has used 2 squares and 2 triangles. How many and what shape tiles could Mark use to finish his design?

6. Draw a picture of Mark's design.

Name _____

Practice

7-1

Using Mental Math to Multiply 2-Digit Numbers

Multiply. Use mental math.

1. $4 \times 30 =$ _____

2. $5 \times 90 =$ _____

3. $9 \times 200 =$ _____

4. $6 \times 500 =$ _____

5. $3 \times 600 =$ _____

6. $0 \times 600 =$ _____

7. $90 \times 70 =$ _____

8. $70 \times 400 =$ _____

9. $50 \times 800 =$ _____

10. $30 \times 800 =$ _____

11. $90 \times 500 =$ _____

12. $30 \times 4,000 =$ _____

13. **Number Sense** How many zeros are in the product of 60×900 ? Explain how you know.

Truck A can haul 400 pounds in one trip. Truck B can haul 300 pounds in one trip.

14. How many pounds can Truck A haul in 9 trips? _____

15. How many pounds can Truck B haul in 50 trips? _____

16. How many pounds can Truck A haul in 70 trips?

A 280 **B** 2,800 **C** 28,000 **D** 280,000

17. **Writing to Explain** There are 9 players on each basketball team in a league. Explain how you can find the total number of players in the league if there are 30 teams.

Name _____

Estimating Products

Use rounding to estimate each product.

1. 38×29 _____

2. 71×47 _____

3. 54×76 _____

4. 121×62 _____

5. 548×28 _____

6. 823×83 _____

7. 67×289 _____

8. 183×34 _____

Use compatible numbers to estimate each product.

9. 28×87

10. 673×85

11. 54×347 _____

12. 65×724 _____

13. 81×643 _____

14. 44×444 _____

15. 72×285 _____

16. 61×761 _____

17. Vera has 8 boxes of paper clips. Each box has 275 paper clips. About how many paper clips does Vera have?

A 240

B 1,600

C 2,400

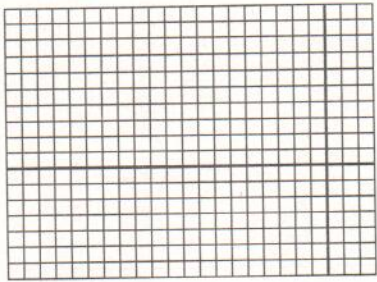
D 24,000

18. **Writing to Explain** A wind farm generates 330 kilowatts of electricity each day. About how many kilowatts does the wind farm produce in a week? Explain.

Arrays and an Expanded Algorithm

Use the grid to help you complete the calculation.

1.



$$\begin{array}{r} 23 \\ \times 17 \\ \hline \square \square \\ \square \square \square \\ \square \square \\ \square \square \square \\ \hline \square \square \square \end{array}$$

2.

$$\begin{array}{r} 31 \\ \times 19 \\ \hline \square \\ \square \square \square \\ \square \square \\ \square \square \square \\ \hline \square \square \square \end{array}$$

3.

$$\begin{array}{r} 26 \\ \times 22 \\ \hline \square \square \\ \square \square \\ \square \square \square \\ \square \square \square \\ \hline \square \square \square \end{array}$$

4.

$$\begin{array}{r} 33 \\ \times 14 \\ \hline \square \square \\ \square \square \square \\ \square \square \\ \square \square \square \\ \hline \square \square \square \end{array}$$

5. $24 \times 57 =$ _____

6. $44 \times 48 =$ _____

7. A red kangaroo can cover 40 feet in 1 jump. How many feet can the red kangaroo cover in 12 jumps? _____

8. Barb exercises for 14 hours in 1 week. How many hours does she exercise in 32 weeks?

A 496 h

B 448 h

C 420 h

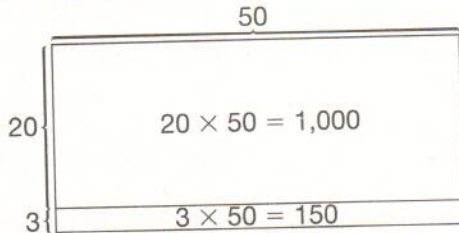
D 324 h

9. **Writing to Explain** Explain how the product of 16×34 is like the product of 6×34 plus 10×34 .

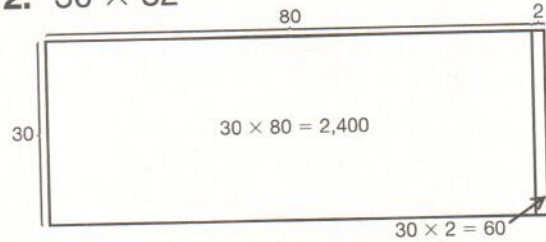
Multiplying 2-Digit Numbers by Multiples of Ten

Use the grid to show the partial products. Multiply to find the product.

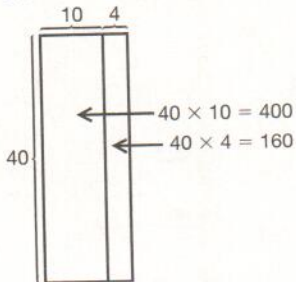
1. 23×50



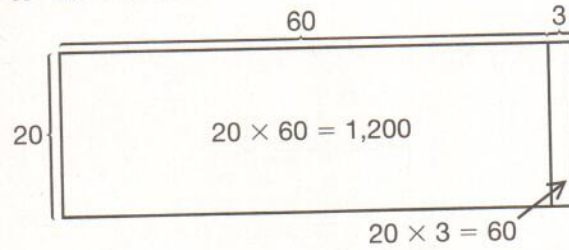
2. 30×82



3. 14×40



4. 20×63



Use compatible numbers to estimate each product.

5. Martika works as a legal secretary. She earns \$20 an hour. How much does Martika earn if she works 32 hours? _____

6. Which numbers are the partial products of 77×30 ?

- A** 210 and 700 **B** 2,100 and 210 **C** 511 and 2,100 **D** 4,900 and 210

7. **Writing to Explain** Explain how you can find the product of 40×16 by breaking apart the numbers.

Multiplying 2-Digit by 2-Digit Numbers

$$\begin{array}{r} 1. \quad 54 \\ \times 17 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 36 \\ \times 20 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 53 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 48 \\ \times 46 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 37 \\ \times 83 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 62 \\ \times 17 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 91 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 28 \\ \times 56 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 70 \\ \times 39 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 58 \\ \times 90 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 97 \\ \times 42 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 64 \\ \times 88 \\ \hline \end{array}$$

13. A carton holds 24 bottles of juice. How many juice bottles are in 15 cartons?
- _____

14. How much do 21 bushels of sweet corn weigh?
- _____

Vegetable	Weight of 1 Bushel
Asparagus	24 lb
Beets	52 lb
Carrots	50 lb
Sweet corn	35 lb

15. How much do 18 bushels of asparagus weigh?
- _____

16. How much more do 13 bushels of beets weigh than 13 bushels of carrots?
- _____

17. Which of the following is a reasonable answer for 92×98 ?

A 1,800

B 9,000

C 10,000

D 90,000

18. **Writing to Explain** Garth is multiplying 29×16 . He has 174 after multiplying the ones and 290 after multiplying the tens. Explain how Garth can find the final product.
- _____