



# OUR LADY OF VICTORY SCHOOL

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## 6TH, 7TH & 8TH SUMMER READING ASSIGNMENT

**INCOMING 6TH, 7TH & 8TH** grade students have two books assigned to read during the summer. They may choose any two books from the attached *Jr. High Recommended Reading List*. Students are expected to complete a "Story Map" and "Book Critique" on their first book and one of the following on their second book:

- **Book Report Cover:** Create an original book jacket for the book you read. You must include a brief summary of the book (in your own words), a picture that represents a scene or them of the book, a list of characters (minimum three) with their important traits, and a quote from the book (one you think is interesting or is something that tells about the book in some way). Note: A book jacket is like a new cover for the book. All work should be original and not just a copy of the cover. *Be creative, follow all directions, and have fun!*
- **Book Report Collage:** On your own paper or poster, assemble a collection of ten or more pictures that relate significantly to this book. These pictures may be drawn, cut from magazines, computer generated, etc. Arrange your pictures in an interesting manner, creating a collage. In addition, attach a separate piece of paper listing each picture and tell why they are important to the story. Write a short, personal response to the book you read. Your response should include why you chose to read this book, if you liked/disliked this book, would you recommend this book to someone to read, why or why not.
- **Written Book Report:** Attaches is a "Storyboard" to help in completing a written book report. The graphic organizer is used to sequence and summarize the main points of the story. If you choose to complete the written book report, you may use this template or work on separate paper. The report maybe hand written or typed. *Paragraph structure, grammar, and spelling count!*

*You only have to complete one of the above items for your second book!*

In summary, you will be reading two separate books, of your choice, from the recommended reading list (attached). For the first book, complete the "Story Map" and "Book Critique." For the second book, choose one of the three bulleted items above. **Both assignments are due the first week school resumes!**

Reading is an integral part of your child's education and development. I encourage you to have your child read a minimum of 30 minutes a day. This promotes reading comprehension and vocabulary development. Students may read the newspaper, magazines, short stories, and any type of books. The public library is open during the summer – books do not need to be purchased.

If you have any questions regarding the summer reading assignment, please contact me at [Bouchard@fresnoolv.org](mailto:Bouchard@fresnoolv.org) or the office during their summer hours. Have a great summer!

God Bless,  
Mrs. Bouchard

## JUNIOR HIGH SCHOOL SUGGESTED READING

Alcott, L.M	Little Men
	Little Women
Armstrong, W.	Sounder
Buck, Pearl S.	The Big Wave
Byars, Betsy	The Summer of the Swans
	The House of Wings
Choi, Sook Nyul	Echoes of the White Giraffe
Couriander, Harold	Cowtail Switch
Dahl, Roald	Willy Wonka
DeAngell, Marguerite	Door in the Wall
Defoe, D.	Robinson Carusoe
DePaolo, Tomie	Series of Religious Stories
Dickens, Charles	Christmas Carol
Doherty, Paul	King Arthur
Doyle, Arthur C.	Adventures of Sherlock Holmes
Drucker, Olga	Kinder Transport
Forbes, Esther	Johnny Tremain
Frank, Anne	Diary of a Young Girl
George, Jean	Julie of the Wolves
	My Side of the Mountain
Gipson, Fred	Old Yeller
Grahame, K.	The Wind in the Willows
Gunther, J.	Death Be Not Proud
Herriot, J.	All Creatures Great and Small
Hinton, S.E.	The Outsiders
	Tex
	That Was this, This Is Now
Holman, Selice	Slake's Limbo
Hunt, Irene	Across Five Aprils
Juster, Norton	The Phantom Tollbooth
James, L & Collier, Chris	My Brother Sam is Dead
Jarnow, Jill	One of the Boys
Kerr, Judith	When Hitler Stole Pink Rabbit
Keyes, Daniel	Flowers for Algernon
<del>L'Engle, Madeleine</del>	<del>Wrinkle in Time</del>
Lewis, C.S.	Chronicles of Narnia
London, Jack	The Call of the Wild
	The Sea Wolf
	White Fang
<del>Lowry, Lois</del>	<del>The Giver</del>
McCullers, C.	The Hear is a Lonely Hunter
Montgomery, L.M.	Anne of Green Gables
Meyers, Walter Dean	Outside Shot
Naylor, Phyllis	Shiloh

<del>O'Dell, Scott</del>	<del>Island of the Blue Dolphins</del>
	The Black Pearl
Rawlings, Marjorie Kinnen	The Yearling
Rawls, Wilson	Where the Red Fern Grows
Reiss, Johanna	The Upstairs Room
Schaefer, Jack	Shane
<del>Seldon, George</del>	<del>Cricket in Time Square</del>
Snyder, Zilpha	Libby on Wednesday
Sperry, Armstrong	Call it Courage
Stevenson, Robert Louis	Kidnapped
	Treasure Island
Taylor, Mildred	Roll of Thunder Hear my Cry
Thomas, Jane	Courage at Indian Deep
Twain, Mark	Huck Finn
	Tom Sawyer
Verne, J	Twenty Thousand Leagues Under the Sea
Voight, Cynthia	Building Blocks
	Dacey's Song
Wells, H.G.	The Time Machine
White, E.B.	Charlotte's Web
Wilder, T.	The Bridge of San Luis Rey
Zindel, P	The Pigman

Name of Book: \_\_\_\_\_ Author: \_\_\_\_\_

# Story Map

Follow the people, places and events in the story.

<b>Setting</b>
Time
Place

<b>Characters</b>
Protagonist (the main character)
Antagonist (the person or force opposing the protagonist)

<b>Conflict</b>
Rising Action (list three events that build suspense)
1
2
3

<b>Climax</b>
Explain the climax. The climax is the moment before we know the answers to the questions the conflict has created. It is the peak of suspense.

**Name:**

## **Book Critique**

1. What is your overall evaluation of this book?

\_\_\_\_ Poor    \_\_\_\_ Fair    \_\_\_\_ Good    \_\_\_\_ Very Good    \_\_\_\_ Excellent

2. Why do you think we read this book?

3. How would you rate this book in the following areas?

**Action**        \_\_\_\_ Poor \_\_\_\_ Fair \_\_\_\_ Good \_\_\_\_ Very Good \_\_\_\_ Excellent

**Originality**    \_\_\_\_ Poor \_\_\_\_ Fair \_\_\_\_ Good \_\_\_\_ Very Good \_\_\_\_ Excellent

**Interest**        \_\_\_\_ Poor \_\_\_\_ Fair \_\_\_\_ Good \_\_\_\_ Very Good \_\_\_\_ Excellent

**Character  
Development**    \_\_\_\_ Poor \_\_\_\_ Fair \_\_\_\_ Good \_\_\_\_ Very Good \_\_\_\_ Excellent

4. Elaborate on one topic in question 3. Why do you feel this way?

5. Describe how this book could be applied to your life. Describe a part of the book you identified with.

6. Detail the strengths/weaknesses of this book.  
Strengths:

Weaknesses:



# Storyboard



Name(s): \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Storyboard panel 1: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 2: Three horizontal lines for writing.

Storyboard panel 3: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 4: Three horizontal lines for writing.

Storyboard panel 5: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 6: Three horizontal lines for writing.

Storyboard panel 7: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 8: Three horizontal lines for writing.

Storyboard panel 9: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 10: Three horizontal lines for writing.

Storyboard panel 11: A large empty rectangular box with a small oval in the bottom-left corner.

Storyboard panel 12: Three horizontal lines for writing.

# Summer Math Packet

4th Grade

# WHOLE NUMBERS: NUMERATION

## *Standard Form for Whole Numbers*

Write each number in standard form, using commas.

1. eight thousand \_\_\_\_\_
2. six hundred eighty thousand, five hundred \_\_\_\_\_
3. one billion \_\_\_\_\_
4. nine hundred \_\_\_\_\_
5. two hundred eighty million, five hundred thousand \_\_\_\_\_
6. six hundred thousand, seven hundred \_\_\_\_\_
7. one thousand, two hundred \_\_\_\_\_
8. three thousand, three hundred \_\_\_\_\_
9. seven hundred four \_\_\_\_\_
10. fifty thousand \_\_\_\_\_
11. nine billion, five hundred thousand, seven hundred twenty-one \_\_\_\_\_
12. four hundred thousand, sixteen \_\_\_\_\_
13. twenty million, ninety thousand, six \_\_\_\_\_
14. three hundred million, nine hundred thousand \_\_\_\_\_
15. fifty thousand, forty-eight \_\_\_\_\_
16. eight hundred million, six thousand \_\_\_\_\_
17. seven trillion \_\_\_\_\_
18. five hundred three \_\_\_\_\_
19. four thousand eight \_\_\_\_\_
20. twenty-five thousand, twenty-three \_\_\_\_\_

# Practice

For use after 3-2

What is the value of the digit 7 in each number?

1. 0.7

\_\_\_\_\_

2. 4.00712

\_\_\_\_\_

3. 2.179

\_\_\_\_\_

4. 7.089

\_\_\_\_\_

5. 348.92971

\_\_\_\_\_

6. 72.14

\_\_\_\_\_

Write the words for each number in standard form.

7. 12.873

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. 8.0552

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. 1.0924

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. 3.4700

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. 0.00065

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. 0.0049

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Write each number in expanded form.

13. 5.349

\_\_\_\_\_

14. 0.7829

\_\_\_\_\_

15. 8.495

\_\_\_\_\_

16. fourteen and three tenths

\_\_\_\_\_

17. ten and eleven thousandths

\_\_\_\_\_

18. three and fifteen hundred-thousandths

\_\_\_\_\_

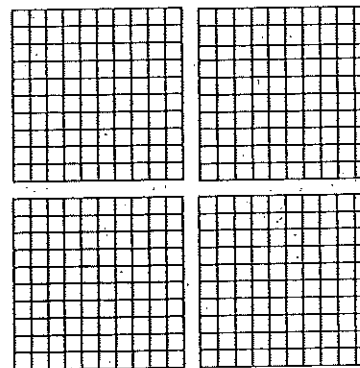
19. Draw a model for two and thirty-seven hundredths.

a. Write the number in expanded form. \_\_\_\_\_

b. In your model, how did you represent two? \_\_\_\_\_

c. How many tenths and hundredths did you shade? \_\_\_\_\_

d. Write the number in standard form. \_\_\_\_\_



# WHOLE NUMBERS: OPERATIONS

## *Adding Whole Numbers*

Add:  $8,742 + 186 + 385$

First, estimate the sum.

$$\begin{array}{r} 8,742 \rightarrow 8,700 \\ 186 \rightarrow 200 \\ + 385 \rightarrow + 400 \\ \hline 9,300 \end{array}$$

Round each addend to the greatest place of the smallest addend.  
 The smallest addend is 186.  
 The greatest place in 186 is hundreds.  
 Round all addends to the nearest hundred.  
 Add to estimate the sum.

Now add.

$$\begin{array}{r} 8,742 \\ 186 \\ + 385 \\ \hline 9,313 \end{array}$$

To check:

a. Compare the sum with the estimated sum. Is 9,313 close to 9,300? Yes.

b. Add up.

$$\begin{array}{r} 8,742 \\ 186 \\ + 385 \\ \hline 9,313 \end{array}$$

Write the estimated sum to the right of each problem. Then add and check.

1.  $\begin{array}{r} 38 \\ + 27 \\ \hline \end{array}$  \_\_\_\_\_

2.  $\begin{array}{r} 56 \\ + 21 \\ \hline \end{array}$  \_\_\_\_\_

3.  $\begin{array}{r} 25 \\ 34 \\ + 87 \\ \hline \end{array}$  \_\_\_\_\_

4.  $\begin{array}{r} 16 \\ 98 \\ + 44 \\ \hline \end{array}$  \_\_\_\_\_

5.  $\begin{array}{r} 348 \\ + 267 \\ \hline \end{array}$  \_\_\_\_\_

6.  $\begin{array}{r} 4,529 \\ + 3,874 \\ \hline \end{array}$  \_\_\_\_\_

7.  $\begin{array}{r} 623 \\ 415 \\ + 381 \\ \hline \end{array}$  \_\_\_\_\_

8.  $\begin{array}{r} 7,356 \\ 4,218 \\ + 5,033 \\ \hline \end{array}$  \_\_\_\_\_

9.  $\begin{array}{r} 14,386 \\ + 27,121 \\ \hline \end{array}$  \_\_\_\_\_

**WHOLE NUMBERS: OPERATIONS***Partial Products*Multiply:  $328 \times 54$ 

$$\begin{array}{r} 328 \\ \times 54 \\ \hline 1312 \\ 0 \end{array}$$

Multiply 328 by 4.  
Write the partial product.  
Write a zero directly under the ones place  
in the first partial product.

$$\begin{array}{r} 328 \\ \times 54 \\ \hline 1312 \\ 16400 \\ \hline 17,712 \end{array}$$

Multiply 328 by 5.  
Write that partial product to the  
left of the zero.  
Add the two partial products.

Now check your answer by reversing the factors.

$$\begin{array}{r} 54 \\ \times 328 \\ \hline 432 \\ 1080 \\ 16200 \\ \hline 17,712 \end{array}$$

Multiply. Then check your answer.

1.  $\begin{array}{r} 71 \\ \times 16 \\ \hline \end{array}$

2.  $\begin{array}{r} 38 \\ \times 25 \\ \hline \end{array}$

3.  $\begin{array}{r} 49 \\ \times 73 \\ \hline \end{array}$

4.  $\begin{array}{r} 64 \\ \times 57 \\ \hline \end{array}$

5.  $\begin{array}{r} 216 \\ \times 84 \\ \hline \end{array}$

6.  $\begin{array}{r} 471 \\ \times 58 \\ \hline \end{array}$

7.  $\begin{array}{r} 376 \\ \times 97 \\ \hline \end{array}$

8.  $\begin{array}{r} 919 \\ \times 20 \\ \hline \end{array}$

9.  $\begin{array}{r} 4,285 \\ \times 61 \\ \hline \end{array}$

10.  $\begin{array}{r} 3,198 \\ \times 72 \\ \hline \end{array}$

11.  $\begin{array}{r} 8,836 \\ \times 125 \\ \hline \end{array}$

12.  $\begin{array}{r} 7,025 \\ \times 609 \\ \hline \end{array}$

13.  $\begin{array}{r} 4,008 \\ \times 309 \\ \hline \end{array}$

14.  $\begin{array}{r} 368 \\ \times 45,328 \\ \hline \end{array}$

15.  $\begin{array}{r} 49,218 \\ \times 607 \\ \hline \end{array}$

16.  $\begin{array}{r} 30,019 \\ \times 6,081 \\ \hline \end{array}$

# WHOLE NUMBERS: OPERATIONS

## Multiplying by Numbers Greater Than 10

A Bavarian physicist discovered X-rays accidentally in 1895. Name the physicist.

To solve:

1. Work each exercise.
2. Look at the first two digits of each product. Find the same two digits below.
3. Write the letter of the exercise above the number each time it appears.

**Example:** Multiply. E:  $63 \times 13$

**Solution:** 819 Write E above 81.

Multiply.

- |   |   |   |  |
|---|---|---|--|
| A. $\begin{array}{r} 67 \\ \times 15 \\ \hline \end{array}$   | E. $\begin{array}{r} 586 \\ \times 22 \\ \hline \end{array}$    | N. $\begin{array}{r} 7,845 \\ \times 35 \\ \hline \end{array}$    | L. $\begin{array}{r} 700 \\ \times 41 \\ \hline \end{array}$     |
| D. $\begin{array}{r} 25 \\ \times 34 \\ \hline \end{array}$   | L. $\begin{array}{r} 539 \\ \times 63 \\ \hline \end{array}$    | E. $\begin{array}{r} 27,554 \\ \times 57 \\ \hline \end{array}$   | G. $\begin{array}{r} 23 \\ \times 8,477 \\ \hline \end{array}$   |
| O. $\begin{array}{r} 482 \\ \times 241 \\ \hline \end{array}$ | H. $\begin{array}{r} 6,287 \\ \times 853 \\ \hline \end{array}$ | R. $\begin{array}{r} 6,543 \\ \times 1,278 \\ \hline \end{array}$ | N. $\begin{array}{r} 6,300 \\ \times 92 \\ \hline \end{array}$   |
| I. $\begin{array}{r} 600 \\ \times 900 \\ \hline \end{array}$ | N. $\begin{array}{r} 806 \\ \times 255 \\ \hline \end{array}$   | M. $\begin{array}{r} 741 \\ \times 605 \\ \hline \end{array}$     | C. $\begin{array}{r} 50,809 \\ \times 508 \\ \hline \end{array}$ |

- T.  $54 \times 958$  \_\_\_\_\_ O. Multiply 78 by 29. \_\_\_\_\_  
 W.  $791 \times 854$  \_\_\_\_\_ R. Solve:  $98 \times 48 = n$  \_\_\_\_\_

E

67 54 28 53 81 33 44 25 22 27 83 10 85

47 11 12 20 51 19 15 57

# WHOLE NUMBERS: OPERATIONS

## Zeros in the Quotient

Divide: 1,463 by 7

$$\begin{array}{r} 20 \\ 7 \overline{)1,463} \\ \underline{14} \\ 06 \end{array}$$

7 is greater than 1. Underline the 4 to help you remember where to put the first digit in the quotient.  
 $14 \div 7 = 2$ . Write 2 over the underlined 4.  
 Multiply 7 by 2. Write 14 below 14 in the dividend.  
 Then subtract.

Bring down the 6. 7 is greater than 6.  
 Write a zero above the 6.

$$\begin{array}{r} 209 \\ 7 \overline{)1,463} \\ \underline{14} \\ 063 \\ \underline{63} \\ 0 \end{array}$$

Bring down the 3.  
 $63 \div 7 = 9$ . Write 9 over the 3 in the dividend.  
 Multiply 7 by 9. Write 63 below 63 and subtract.  
 The remainder is zero.

Check your answer.

$$\begin{array}{r} 209 \\ \times 7 \\ \hline 1,463 \end{array}$$

Choose the correct quotient.

- |                          |          |        |        |       |
|--------------------------|----------|--------|--------|-------|
| 1. $7 \overline{)420}$   | a. 6     | b. 60  | c. 16  | _____ |
| 2. $2 \overline{)1,012}$ | a. 56    | b. 156 | c. 506 | _____ |
| 3. $8 \overline{)2,448}$ | a. 136   | b. 306 | c. 36  | _____ |
| 4. $3 \overline{)3,240}$ | a. 1,080 | b. 18  | c. 108 | _____ |

Divide and check.

- |                           |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|---------------------------|
| 5. $6 \overline{)408}$    | 6. $3 \overline{)1,527}$  | 7. $4 \overline{)828}$    | 8. $5 \overline{)20,355}$ |
| 9. $7 \overline{)39,221}$ | 10. $6 \overline{)1,020}$ | 11. $9 \overline{)7,434}$ | 12. $3 \overline{)1,224}$ |

# Compare and Order Numbers

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

- |                            |                            |                              |
|----------------------------|----------------------------|------------------------------|
| 1. 5.23 $\bigcirc$ 5.32    | 2. 2,345 $\bigcirc$ 2.345  | 3. 1.7 $\bigcirc$ 1.70       |
| 4. 15.78 $\bigcirc$ 157.8  | 5. 14.93 $\bigcirc$ 14.903 | 6. 85.6 $\bigcirc$ 85.06     |
| 7. 10.3 $\bigcirc$ 10.33   | 8. 80.6 $\bigcirc$ 80.60   | 9. 4.09 $\bigcirc$ 4.90      |
| 10. 2,703 $\bigcirc$ 2,730 | 11. 49.78 $\bigcirc$ 49.87 | 12. 15.37 $\bigcirc$ 15.3700 |

Order from least to greatest. Use a number line.

- |                                |                                  |
|--------------------------------|----------------------------------|
| 13. 1.5 1.05 1.505<br>_____    | 14. 74.3 73.4 43.7<br>_____      |
| 15. 8.005 8.505 8.500<br>_____ | 16. 0.32 0.23 0.032<br>_____     |
| 17. 300.5 30.6 3.506<br>_____  | 18. 2.003 2.03 20.33<br>_____    |
| 19. 100.0 10.50 1.500<br>_____ | 20. 52.603 51.987 53.45<br>_____ |

## Test Prep

21. Which of the following represents numbers written from least to greatest?
- A 0.96 0.69 0.096  
B 10.4 10.5 1.6  
C 6.3 6.2 0.62  
D 1.79 1.80 1.82
22. Suppose you have two decimal numbers between 0 and 1. Explain how you would decide which of the two numbers is greater.
- \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# DECIMALS

## Multiplication Practice

Multiply.

1. 
$$\begin{array}{r} 0.4 \\ \times 7 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 54 \\ \times 0.72 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 0.651 \\ \times 46 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 0.8242 \\ \times 9 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 0.85 \\ \times 30 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 0.07 \\ \times 16 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 6 \\ \times 0.08 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 0.007 \\ \times 13 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 0.0024 \\ \times 4 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 270 \\ \times 3.8 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 0.5 \\ \times 0.8 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 0.3 \\ \times 0.1 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 0.27 \\ \times 0.8 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 0.14 \\ \times 0.4 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 3.2 \\ \times 0.35 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 0.08 \\ \times 0.52 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 0.245 \\ \times 2.4 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 0.00125 \\ \times 0.0144 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 6.15 \\ \times 0.004 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 5.219 \\ \times 6.32 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 0.0006 \\ \times 0.03 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} \$0.62 \\ \times 14 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} \$3.77 \\ \times 21 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} \$32.10 \\ \times 0.24 \\ \hline \end{array}$$

25.  $8 \times 0.6$  \_\_\_\_\_

26.  $0.5 \times 0.45$  \_\_\_\_\_

27. Find 0.6 of 42.5. \_\_\_\_\_

28. Circle the nearest given estimate for  $0.48 \times \$15.90$ .  
 a. \$8      b. \$16      c. \$25

29. Solve:  $0.07 \times 0.3 = n$  \_\_\_\_\_

## Divide by Two-Digit Divisors

Estimate the quotient, using compatible numbers.  
Write the compatible numbers you used.

1.  $567 \div 83$  \_\_\_\_\_

2.  $2,512 \div 53$  \_\_\_\_\_

Divide. Then use estimation or multiplication to check your answer.

3.  $27 \overline{)562}$

4.  $36 \overline{)4,296}$

5.  $42 \overline{)52,436}$

6.  $49 \overline{)2,768}$

7.  $54 \overline{)5,683}$

8.  $74 \overline{)45,529}$

**Mental Math** Divide, using mental math.

9.  $30 \overline{)960}$

10.  $40 \overline{)160}$

11.  $25 \overline{)7,550}$

**Algebra • Functions** Find each missing value of  $y$ .

12.

<b>Rule: <math>y = x \div 45</math></b>			
$x$	855	2,790	8,640
$y$			

13.

<b>Rule: <math>y = 1,890 \div x</math></b>			
$x$	2	5	6
$y$			

### **Test Prep**

14. Which is the correct answer to  $25,897 \div 46$ ?

- A 541 R11                      C 562 R45  
B 562                                D 563

15. A school bought 2,625 new books. If each of 25 classrooms is to receive the same number of books, how many books will each classroom receive?

\_\_\_\_\_

# DECIMALS

## Dividing Decimals by Decimals

Divide:  $0.00798 \div 0.21$

First, estimate the quotient.

$0.21 \rightarrow 0.2$	Round the divisor to its highest place.
$0.00798 \rightarrow 0.008$	Round the dividend to a number divisible by the divisor.
$0.008 \div 0.2 = 0.04$	Divide to get an estimate.

Now divide.

$$0.21 \overline{)0.00798}$$

To make the divisor a whole number, move the decimal point two places to the right.  
 Also move the decimal point 2 places to the right in the dividend.  
 Write a decimal point in the quotient directly above the decimal point in the dividend.

$$\begin{array}{r} 0.038 \\ 0.21 \overline{)0.00798} \\ \underline{0} \\ 79 \\ \underline{63} \\ 168 \\ \underline{168} \\ 0 \end{array}$$

Write a zero since 7 cannot be divided by 21.

Check:  $0.038 \times 0.21 = 0.00798$

$$\begin{array}{r} 0.038 \\ \times 0.21 \\ \hline 38 \\ 76 \\ \hline 0.00798 \end{array}$$

Use the original divisor.

Choose the problem that is equivalent to the given problem.

- |                             |                           |                           |                                |
|-----------------------------|---------------------------|---------------------------|--------------------------------|
| 1. $3.2 \overline{)16}$     | a. $32 \overline{)16.0}$  | b. $32 \overline{)160}$   | c. $32 \overline{)1600}$ _____ |
| 2. $0.08 \overline{)7}$     | a. $8 \overline{)7000}$   | b. $8 \overline{)70}$     | c. $8 \overline{)700}$ _____   |
| 3. $0.2 \overline{)34}$     | a. $2 \overline{)3.4}$    | b. $2 \overline{)34}$     | c. $2 \overline{)340}$ _____   |
| 4. $5.81 \overline{)0.436}$ | a. $581 \overline{)43.6}$ | b. $581 \overline{)4.36}$ | c. $581 \overline{)436}$ _____ |

Place the decimal point in each quotient. You will need to write zeros in the quotient to make the correct number of places.

- |                              |                                  |                               |                                   |
|------------------------------|----------------------------------|-------------------------------|-----------------------------------|
| 5. $0.8 \overline{)0.024}^3$ | 6. $1.7 \overline{)0.0187}^{11}$ | 7. $0.25 \overline{)0.015}^6$ | 8. $0.804 \overline{)0.001608}^2$ |
|------------------------------|----------------------------------|-------------------------------|-----------------------------------|

For use after 7-1.

## Practice

List all the factors of each number.

1. 36 \_\_\_\_\_ 2. 42 \_\_\_\_\_ 3. 50 \_\_\_\_\_ 4. 41 \_\_\_\_\_  
 \_\_\_\_\_

Tell whether the first number is a factor of the second.

5. 2; 71 \_\_\_\_\_ 6. 1; 18 \_\_\_\_\_ 7. 3; 81 \_\_\_\_\_ 8. 4; 74 \_\_\_\_\_  
 9. 9; 522 \_\_\_\_\_ 10. 8; 508 \_\_\_\_\_ 11. 13; 179 \_\_\_\_\_ 12. 17; 3,587 \_\_\_\_\_

Tell whether each number is prime or composite.

13. 74 \_\_\_\_\_ 14. 83 \_\_\_\_\_ 15. 23 \_\_\_\_\_ 16. 51 \_\_\_\_\_  
 17. 73 \_\_\_\_\_ 18. 91 \_\_\_\_\_ 19. 109 \_\_\_\_\_ 20. 211 \_\_\_\_\_

Write the prime factorization of each number.

21. 70 \_\_\_\_\_ 22. 92 \_\_\_\_\_ 23. 120 \_\_\_\_\_ 24. 118 \_\_\_\_\_  
 25. 200 \_\_\_\_\_ 26. 180 \_\_\_\_\_ 27. 360 \_\_\_\_\_ 28. 500 \_\_\_\_\_  
 29. 187 \_\_\_\_\_ 30. 364 \_\_\_\_\_ 31. 1,287 \_\_\_\_\_ 32. 1,122 \_\_\_\_\_

Find the GCF of each set of numbers.

33. 24, 40 \_\_\_\_\_ 34. 20, 42 \_\_\_\_\_ 35. 56, 63 \_\_\_\_\_ 36. 48, 72 \_\_\_\_\_  
 37. 18, 24, 36 \_\_\_\_\_ 38. 20, 45, 75 \_\_\_\_\_ 39. 120, 150, 180 \_\_\_\_\_ 40. 200, 250, 400 \_\_\_\_\_

41. Mr. Turner distributed some supplies in his office. He distributed 120 pencils, 300 paper clips, and 16 pens. What is the greatest number of people there can be in the office if each person received the same number of items? \_\_\_\_\_
42. The baseball league bought new equipment for the teams. They bought 288 baseballs, 40 bats, and 24 equipment bags. How many teams are there if all the new equipment is distributed equally among the teams? \_\_\_\_\_

**Practice**

For use after 7-3

Make a list to find the GCF of each set of numbers.

- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| 1. 8, 12<br>_____       | 2. 18, 27<br>_____      | 3. 15, 23<br>_____      | 4. 17, 34<br>_____      |
| 5. 24, 12<br>_____      | 6. 18, 24<br>_____      | 7. 5, 25<br>_____       | 8. 20, 25<br>_____      |
| 9. 10, 15<br>_____      | 10. 25, 75<br>_____     | 11. 14, 21<br>_____     | 12. 18, 57<br>_____     |
| 13. 32, 24, 40<br>_____ | 14. 25, 60, 75<br>_____ | 15. 12, 35, 15<br>_____ | 16. 15, 35, 20<br>_____ |

Use prime factorization to find the GCF of each set of numbers.

- |                        |                          |                          |                            |
|------------------------|--------------------------|--------------------------|----------------------------|
| 17. 28, 24<br>_____    | 18. 27, 36<br>_____      | 19. 15, 305<br>_____     | 20. 24, 45<br>_____        |
| 21. 57, 27<br>_____    | 22. 24, 48<br>_____      | 23. 56, 35<br>_____      | 24. 29, 87<br>_____        |
| 25. 75, 200<br>_____   | 26. 90, 160<br>_____     | 27. 72, 108<br>_____     | 28. 50, 96<br>_____        |
| 29. 8, 42, 60<br>_____ | 30. 75, 90, 120<br>_____ | 31. 45, 70, 120<br>_____ | 32. 200, 450, 300<br>_____ |

33. The GCF of two numbers is 850. One number is *not* a multiple of the other. What are the smallest two numbers these two could be?  
\_\_\_\_\_

34. The GCF of two numbers is 479. One number is even, and the other number is odd. One number is *not* a multiple of the other. What are the smallest two numbers these two could be?  
\_\_\_\_\_

35. The GCF of two numbers is 871. Both of the numbers are even, and neither is a multiple of the other. What are the smallest two numbers these could be?  
\_\_\_\_\_

**Practice**

For use after 7-8

Find the LCM of each set of numbers. Use lists of multiples of each number.

1. 5, 10

\_\_\_\_\_

2. 2, 3

\_\_\_\_\_

3. 6, 8

\_\_\_\_\_

4. 4, 6

\_\_\_\_\_

5. 8, 10

\_\_\_\_\_

6. 5, 6

\_\_\_\_\_

7. 12, 15

\_\_\_\_\_

8. 8, 12

\_\_\_\_\_

9. 9, 15

\_\_\_\_\_

10. 6, 15

\_\_\_\_\_

11. 6, 9

\_\_\_\_\_

12. 6, 18

\_\_\_\_\_

13. 3, 5

\_\_\_\_\_

14. 4, 5

\_\_\_\_\_

15. 9, 21

\_\_\_\_\_

16. 7, 28

\_\_\_\_\_

17. 4, 6, 8

\_\_\_\_\_

18. 6, 8, 12

\_\_\_\_\_

19. 4, 9, 12

\_\_\_\_\_

20. 6, 9, 12

\_\_\_\_\_

21. 6, 12, 15

\_\_\_\_\_

22. 8, 12, 15

\_\_\_\_\_

Find the LCM of each set of numbers. Use prime factorization.

23. 18, 21

\_\_\_\_\_

24. 15, 21

\_\_\_\_\_

25. 18, 24

\_\_\_\_\_

26. 21, 24

\_\_\_\_\_

27. 15, 30

\_\_\_\_\_

28. 24, 30

\_\_\_\_\_

29. 24, 72

\_\_\_\_\_

30. 18, 72

\_\_\_\_\_

31. 8, 42

\_\_\_\_\_

32. 16, 42

\_\_\_\_\_

33. 8, 56

\_\_\_\_\_

34. 6, 81

\_\_\_\_\_

35. 8, 30

\_\_\_\_\_

36. 16, 30

\_\_\_\_\_

37. 18, 30

\_\_\_\_\_

38. 45, 60

\_\_\_\_\_

39. 12, 24, 16

\_\_\_\_\_

40. 8, 16, 20

\_\_\_\_\_

41. 12, 16, 20

\_\_\_\_\_

42. 15, 20, 25

\_\_\_\_\_

43. At one store hot dogs come in packages of eight. Hot dog buns come in packages of twelve. What is the least number of packages of each type that you can buy and have no hot dogs or buns left over?

\_\_\_\_\_

# FRACTIONS AND MIXED NUMBERS

## Least Common Denominator (LCD)

Find the least common denominator (LCD) of  $\frac{3}{4}$  and  $\frac{5}{6}$ .

Then express  $\frac{3}{4}$  and  $\frac{5}{6}$  as equivalent fractions using the LCD.

To find the LCD, first find common multiples of the denominators.

4: 0, 4, 8, 12, 16, 20, 24, 28, 32, 36

6: 0, 6, 12, 18, 24, 30, 36

12, 24, and 36 are all common multiples of 4 and 6. But 12 is the least common multiple, so 12 is the least common denominator of  $\frac{3}{4}$  and  $\frac{5}{6}$ .

Express  $\frac{3}{4}$  and  $\frac{5}{6}$  as equivalent fractions with the LCD (12).

$$12 \div 4 = 3$$

$$12 \div 6 = 2$$

$$\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$$

$$\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

Choose the LCD.

- |                                      |       |       |       |        |       |
|--------------------------------------|-------|-------|-------|--------|-------|
| 1. $\frac{1}{2}$ and $\frac{2}{3}$   | a. 2  | b. 3  | c. 6  | d. 12  | _____ |
| 2. $\frac{3}{5}$ and $\frac{11}{15}$ | a. 5  | b. 15 | c. 75 | d. 60  | _____ |
| 3. $\frac{7}{8}$ and $\frac{5}{6}$   | a. 8  | b. 48 | c. 12 | d. 24  | _____ |
| 4. $\frac{3}{4}$ and $\frac{5}{14}$  | a. 28 | b. 14 | c. 56 | d. 112 | _____ |

Find the LCD of the given fractions. Then express the given fractions as equivalent fractions using the LCD as their new denominator.

5.  $\frac{1}{4}$  and  $\frac{3}{8}$  \_\_\_\_\_

6.  $\frac{1}{2}$  and  $\frac{5}{6}$  \_\_\_\_\_

7.  $\frac{11}{24}$  and  $\frac{2}{3}$  \_\_\_\_\_

8.  $\frac{7}{20}$  and  $\frac{4}{5}$  \_\_\_\_\_

9.  $\frac{2}{3}$  and  $\frac{3}{4}$  \_\_\_\_\_

10.  $\frac{4}{9}$  and  $\frac{3}{8}$  \_\_\_\_\_

11.  $\frac{7}{12}$  and  $\frac{3}{8}$  \_\_\_\_\_

12.  $\frac{1}{2}$ ,  $\frac{2}{3}$ , and  $\frac{3}{5}$  \_\_\_\_\_

13.  $\frac{1}{4}$ ,  $\frac{3}{8}$ , and  $\frac{9}{16}$  \_\_\_\_\_

14.  $\frac{2}{3}$ ,  $\frac{1}{4}$ , and  $\frac{5}{8}$  \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

# Prime Factorization

Write each, using exponents.

1.  $2 \times 2 \times 2$  \_\_\_\_\_    2.  $3 \times 3 \times 5$  \_\_\_\_\_    3.  $7 \times 7 \times 7 \times 7$  \_\_\_\_\_  
 4.  $6 \times 6 \times 5 \times 5$  \_\_\_\_\_    5.  $9 \times 9 \times 9 \times 9 \times 9$  \_\_\_\_\_    6.  $10 \times 10 \times 3$  \_\_\_\_\_

Write each as a product of factors. Then evaluate.

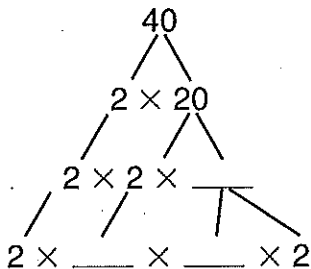
7.  $2^2 \times 3$  \_\_\_\_\_    8.  $5^2 \times 3^2$  \_\_\_\_\_  
 9.  $8^2 \times 5^2$  \_\_\_\_\_    10.  $2^4 \times 3^3$  \_\_\_\_\_

Draw a factor tree to show the prime factorization of each. Then rewrite, using exponents. If the number is prime, write *prime*.

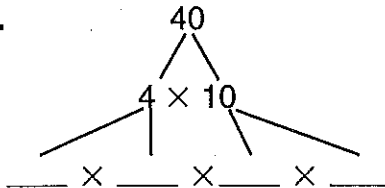
11. 56    12. 75

Complete each factor tree for the number 40.

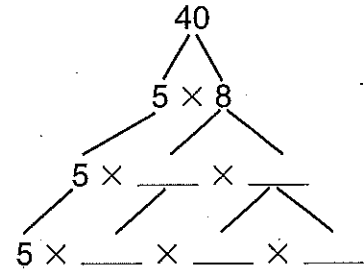
13.



14.



15.



**Algebra • Expressions** Evaluate each expression, given  $a = 3$ ,  $b = 5$ , and  $c = 7$ .

16.  $2^a$  \_\_\_\_\_    17.  $b^a$  \_\_\_\_\_    18.  $c^2 \times 2^a$  \_\_\_\_\_    19.  $2^c \times a^2$  \_\_\_\_\_

## Test Prep

20. Which number is the same as  $2^4 \times 3$ ?

- A 12    C 24  
 B 16    D 48

21. One student began to factor 80 as  $8 \times 10$ . Another student began with  $2 \times 40$ . Will their answers be different? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Practice**

For use after 10-1

Use mental math to write each decimal as a percent.

1. 0.95 \_\_\_\_\_      2. 0.06 \_\_\_\_\_      3. 0.004 \_\_\_\_\_      4. 0.27 \_\_\_\_\_  
 5. 0.63 \_\_\_\_\_      6. 0.005 \_\_\_\_\_      7. 1.4 \_\_\_\_\_      8. 2.57 \_\_\_\_\_

Choose a calculator, paper and pencil, or mental math to write each fraction as a percent. Round to the nearest tenth.

9.  $\frac{4}{5}$  \_\_\_\_\_      10.  $\frac{7}{10}$  \_\_\_\_\_      11.  $\frac{5}{6}$  \_\_\_\_\_      12.  $4\frac{1}{2}$  \_\_\_\_\_  
 13.  $\frac{5}{8}$  \_\_\_\_\_      14.  $\frac{1}{15}$  \_\_\_\_\_      15.  $\frac{9}{25}$  \_\_\_\_\_      16.  $1\frac{7}{8}$  \_\_\_\_\_  
 17.  $\frac{1}{6}$  \_\_\_\_\_      18.  $\frac{11}{12}$  \_\_\_\_\_      19.  $\frac{1}{20}$  \_\_\_\_\_      20.  $3\frac{9}{20}$  \_\_\_\_\_

Express each percent as a fraction in simplest form.

21. 10% \_\_\_\_\_      22. 47% \_\_\_\_\_      23.  $5\frac{1}{2}\%$  \_\_\_\_\_      24. 473% \_\_\_\_\_  
 25. 15% \_\_\_\_\_      26. 92% \_\_\_\_\_      27.  $3\frac{1}{4}\%$  \_\_\_\_\_      28. 548% \_\_\_\_\_  
 29. 85% \_\_\_\_\_      30. 42% \_\_\_\_\_      31. 70% \_\_\_\_\_      32. 150% \_\_\_\_\_

Solve.

33. There are twelve pairs of cranial nerves connected to the brain. Ten of these pairs are related to sight, smell, taste, and sound. What percent of the pairs are related to sight, smell, taste, and sound? \_\_\_\_\_
34. If a person weighs 150 lbs, then calcium makes up 3 lbs of that person's weight. What percent of a person's weight does calcium make up?  
 \_\_\_\_\_
35. A quality control inspector found that 43 out of every 50 radios produced were not defective. What percent of the radios were not defective?  
 \_\_\_\_\_
36. In 1992, 80 varieties of reptiles were on the endangered species list. Eight of these were found only in the United States. What percent of the reptiles on the endangered species list can be found only in the United States?  
 \_\_\_\_\_

# Practice

For use after 3-7

First estimate. Then find the sum or difference.

1.  $0.6 + 5.8$   
\_\_\_\_\_

2.  $2.1 + 3.4$   
\_\_\_\_\_

3.  $3.4 - 0.972$   
\_\_\_\_\_

4.  $3.1 - 2.076$   
\_\_\_\_\_

5.  $8.13 - 2.716$   
\_\_\_\_\_

6.  $5.91 + 2.38$   
\_\_\_\_\_

7.  $3.086 + 6.152$   
\_\_\_\_\_

8.  $4.7 - 1.9$   
\_\_\_\_\_

9.  $9.3 - 3.9$   
\_\_\_\_\_

10.  $5.2 - 1.86$   
\_\_\_\_\_

11.  $15.98 + 26.37$   
\_\_\_\_\_

12.  $9.27 + 15.006$   
\_\_\_\_\_

13.  $5.9 - 2.803$   
\_\_\_\_\_

14.  $15.7 - 8.923$   
\_\_\_\_\_

15.  $4.19 - 2.016$   
\_\_\_\_\_

16.  $14.75 - 6.9264$   
\_\_\_\_\_

17.  $5.1 + 4.83 + 9.002$   
\_\_\_\_\_

18.  $3 + 4.02 + 8.6$   
\_\_\_\_\_

19.  $4.7 + 5.26 + 8.931$   
\_\_\_\_\_

20.  $5.68 + 2.03 + 5.091$   
\_\_\_\_\_

21.  $3.86 + 9.604 + 5.793$   
\_\_\_\_\_

22.  $14.7 + 23.92 + 15.872$   
\_\_\_\_\_

Use the table at the right for Exercises 23-25.

23. Find the sum of the decimals given in the chart. What is the meaning of this sum?

\_\_\_\_\_

\_\_\_\_\_

24. What part of the hourly work force is from ages 25-44? \_\_\_\_\_

25. Which three age groups combined represent about one-fourth of the hourly work force?

\_\_\_\_\_

\_\_\_\_\_

**Ages of Workers Earning Hourly Pay**

Age of Workers	Part of Work Force
16-19	0.08
20-24	0.15
25-34	0.29
35-44	0.24
45-54	0.14
55-64	0.08
65 & over	0.02

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

26. At the grocery store, you need to buy a gallon of milk that costs \$1.59, a pound of spaghetti that costs \$.77, apples that cost \$.89 a bag, green beans that cost \$.59 a can, and juice that costs \$.89 a bottle. You have \$5.00.

a. Estimate whether you have enough money. Explain how you estimated. \_\_\_\_\_

b. Check your answer by addition. How much did the groceries cost? \_\_\_\_\_

**Practice***For use after 4-3***Which operation would you perform first?**

1.  $4 + 6 \times 9$   
\_\_\_\_\_

2.  $(7.1 - 5.6) \times 3$   
\_\_\_\_\_

3.  $14 \div 2 \times 3$   
\_\_\_\_\_

4.  $18 - 5 + 3$   
\_\_\_\_\_

5.  $5.3 \times 2.1 + 6.3$   
\_\_\_\_\_

6.  $5.3 \times (2.1 + 6.3)$   
\_\_\_\_\_

7.  $(9 + 14) - 8 \div 2$   
\_\_\_\_\_

8.  $\frac{27}{4} \times 13 + 6$   
\_\_\_\_\_

9.  $18 - 3 \times 6$   
\_\_\_\_\_

**Evaluate.**

10.  $8 - 3 \times 1 + 5$   
\_\_\_\_\_

11.  $(4.3 - 2.6) \times 5$   
\_\_\_\_\_

12.  $14 \times 6 \div 3$   
\_\_\_\_\_

13.  $10 \div (6.3 - 4.3)$   
\_\_\_\_\_

14.  $9 \times (3 \times 5)$   
\_\_\_\_\_

15.  $7 \times (8 + 6)$   
\_\_\_\_\_

16.  $15 - (2.6 + 3.1)$   
\_\_\_\_\_

17.  $(12 - 9) \times (6 + 1)$   
\_\_\_\_\_

18.  $(9 - 3) \times 2$   
\_\_\_\_\_

19.  $8 - 3 \times 2 + 7$   
\_\_\_\_\_

20.  $(9 - 4) \times 6$   
\_\_\_\_\_

21.  $14 - (2.6 + 3.4)$   
\_\_\_\_\_

**Evaluate using mental math.**

22.  $3 + 5 \times 0$   
\_\_\_\_\_

23.  $(11 - 8) \times 4 + 1$   
\_\_\_\_\_

24.  $(8.6 - 4.2) \times 1$   
\_\_\_\_\_

25.  $27 \div 9 - (7.3 - 6.3)$   
\_\_\_\_\_

26.  $(15.3 - 8.9) \times 0$   
\_\_\_\_\_

27.  $(15 - 8) \times 7 - 4$   
\_\_\_\_\_

**Insert parentheses so that a true statement will be formed.**

28.  $6 + 7 \times 4 - 2 = 26$   
\_\_\_\_\_

29.  $14 - 5 \div 3 = 3$   
\_\_\_\_\_

30.  $27 \div 4 + 5 - 1 = 2$   
\_\_\_\_\_

31. Mr. Piña bought a bag of apples for \$1.59, a dozen eggs for \$.79, a gallon of milk for \$1.79, and a loaf of bread for \$1.20. Estimate Mr. Piña's grocery bill.

\_\_\_\_\_

**Practice***For use after 7-1*

Use mental math to determine whether the first number is divisible by the second.

1. 475; 5 \_\_\_\_\_      2. 5,296; 3 \_\_\_\_\_      3. 843; 2 \_\_\_\_\_      4. 76,780; 10 \_\_\_\_\_  
 5. 456,790; 5 \_\_\_\_\_      6. 3,460; 2 \_\_\_\_\_      7. 4,197; 3 \_\_\_\_\_      8. 100,005; 10 \_\_\_\_\_

Use mental math to determine whether each number is divisible by 1, 2, 3, 5, 9, or 10.

- |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| 9. 126<br>_____     | 10. 257<br>_____    | 11. 430<br>_____    | 12. 535<br>_____    |
| 13. 745<br>_____    | 14. 896<br>_____    | 15. 729<br>_____    | 16. 945<br>_____    |
| 17. 4,580<br>_____  | 18. 6,331<br>_____  | 19. 7,952<br>_____  | 20. 8,000<br>_____  |
| 21. 19,450<br>_____ | 22. 21,789<br>_____ | 23. 43,785<br>_____ | 24. 28,751<br>_____ |

Find the digit to make each number divisible by 9.

25. 54,78□      26. 42, □97      27. 83, 2□4      28. 53□, 904

Circle A, B, C, or D. Which number satisfies the given conditions?

29. divisible by 1, 3, and 5  
 A. 10      B. 93      C. 45      D. 54
30. divisible by 1, 2, 3, and 9  
 A. 18      B. 9      C. 6      D. 60
31. divisible by 1, 2, 5, and 10  
 A. 406      B. 400      C. 205      D. 716
32. divisible by 1, 2, 3, 5, and 10  
 A. 708      B. 65      C. 200      D. 600
33. There are 159 students to be grouped into relay teams. Each team is to have the same number of students. Can each team have 3, 5, or 6 students?  
 \_\_\_\_\_

# Compare and Order Fractions and Decimals

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

1.  $\frac{3}{4} \bigcirc \frac{4}{5}$

2.  $\frac{7}{12} \bigcirc \frac{1}{2}$

3.  $\frac{9}{10} \bigcirc \frac{11}{12}$

4.  $\frac{7}{8} \bigcirc 0.8$

5.  $\frac{9}{18} \bigcirc 0.5$

6.  $0.6 \bigcirc \frac{2}{3}$

7.  $\frac{39}{100} \bigcirc 0.4$

8.  $\frac{12}{15} \bigcirc 0.8$

9.  $1.8 \bigcirc 1\frac{4}{7}$

10.  $1.25 \bigcirc 1\frac{1}{5}$

11.  $1\frac{9}{10} \bigcirc 1.87$

12.  $2\frac{5}{6} \bigcirc 2.85$

Compare. Write in order from least to greatest.

13.  $\frac{1}{4}, \frac{1}{3}, \frac{5}{12}$  \_\_\_\_\_

14.  $\frac{7}{10}, 0.65, \frac{17}{20}$  \_\_\_\_\_

15.  $\frac{11}{12}, 0.9, 0.95$  \_\_\_\_\_

16.  $1\frac{4}{5}, 1\frac{3}{15}, 1.3$  \_\_\_\_\_

17.  $2\frac{5}{6}, 2\frac{7}{12}, 2\frac{9}{24}$  \_\_\_\_\_

18.  $1.56, 1\frac{1}{2}, 1.506$  \_\_\_\_\_

19.  $\frac{7}{8}, 0.75, \frac{11}{16}, \frac{17}{32}$  \_\_\_\_\_

20.  $1.06, 1\frac{9}{20}, 1\frac{1}{50}, 1.3$  \_\_\_\_\_

**Algebra • Expressions** Compare. Write  $>$ ,  $<$ , or  $=$  for each  $\bigcirc$ .

21.  $\frac{x}{6} \bigcirc \frac{3}{4}$ , given  $x = 4$

22.  $\frac{7}{10} \bigcirc \frac{9}{x}$ , given  $x = 20$

23.  $\frac{4}{x} \bigcirc \frac{3}{4}$ , given  $x = 5$

24.  $\frac{2}{x} \bigcirc \frac{y}{6}$ , given  $x = 3$  and  $y = 4$

25.  $\frac{7}{x} \bigcirc \frac{10}{y}$ , given  $x = 8$  and  $y = 12$

26.  $\frac{4}{x} \bigcirc \frac{y}{15}$  if  $x = 12$  and  $y = 10$

## Test Prep

27. Which fraction is greater than 0.45?

A  $\frac{5}{10}$

C  $\frac{5}{8}$

B  $\frac{7}{12}$

D all are

28. Explain how you can compare 0.75 and  $\frac{4}{5}$ .

\_\_\_\_\_

\_\_\_\_\_

# Subtract With Unlike Denominators

Find each difference. Write your answer in simplest form.

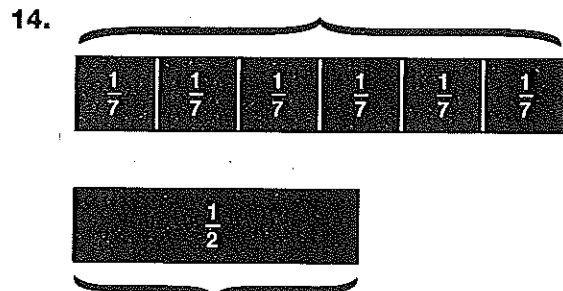
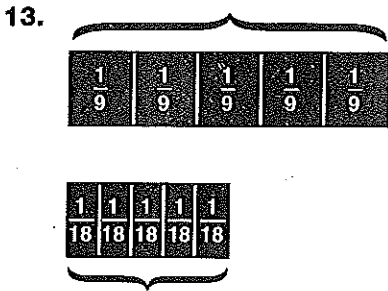
1.  $1\frac{3}{4} - \frac{2}{3}$  \_\_\_\_\_ 2.  $3\frac{1}{4} - 1\frac{1}{8}$  \_\_\_\_\_ 3.  $7\frac{2}{3} - 4$  \_\_\_\_\_

4.  $2\frac{1}{2} - 1\frac{7}{8}$  \_\_\_\_\_ 5.  $4\frac{1}{3} - 1\frac{3}{4}$  \_\_\_\_\_ 6.  $3\frac{5}{6} - 2\frac{2}{3}$  \_\_\_\_\_

7.  $\frac{5}{8} - \frac{1}{3}$  \_\_\_\_\_ 8.  $2\frac{5}{6} - 1\frac{5}{8}$  \_\_\_\_\_ 9.  $9\frac{4}{7} - 3$  \_\_\_\_\_

10.  $3\frac{1}{2} - 1\frac{4}{7}$  \_\_\_\_\_ 11.  $4\frac{7}{8} - 1\frac{11}{12}$  \_\_\_\_\_ 12.  $5\frac{1}{6} - 1\frac{5}{8}$  \_\_\_\_\_

Write and solve a subtraction problem for each model.



**Algebra • Equations** Use mental math and the properties for addition to find the value of  $n$  in each equation.

15.  $n - 2\frac{3}{4} = 4$  \_\_\_\_\_

16.  $n - 1\frac{5}{8} = 3$  \_\_\_\_\_

17.  $n - \frac{3}{4} = \frac{1}{12}$  \_\_\_\_\_

18.  $6\frac{5}{8} - n = 4$  \_\_\_\_\_

**Test Prep**

19. What is  $2\frac{1}{8} - 1\frac{3}{4}$ ?

A  $\frac{3}{8}$

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

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

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

20. Tomi measures  $48\frac{1}{4}$  inches tall, while Sheri measures  $46\frac{3}{8}$  inches tall. Explain how to find how much taller Tomi is than Sheri.

\_\_\_\_\_

## Multiply Mixed Numbers

Multiply. Write each product in simplest form.

1.  $1\frac{1}{2} \times 2\frac{2}{3}$  \_\_\_\_\_

2.  $1\frac{3}{8} \times 12$  \_\_\_\_\_

3.  $1\frac{2}{3} \times 2\frac{9}{10}$  \_\_\_\_\_

4.  $2\frac{3}{4} \times 2\frac{8}{9}$  \_\_\_\_\_

5.  $3\frac{1}{2} \times 2\frac{3}{7}$  \_\_\_\_\_

6.  $2\frac{4}{5} \times 2\frac{10}{21}$  \_\_\_\_\_

7.  $1\frac{7}{8} \times 2\frac{3}{4}$  \_\_\_\_\_

8.  $2\frac{5}{6} \times 2\frac{9}{10}$  \_\_\_\_\_

9.  $2\frac{5}{6} \times 24$  \_\_\_\_\_

10.  $1\frac{2}{3} \times 2\frac{5}{6}$  \_\_\_\_\_

11.  $1\frac{3}{10} \times 2\frac{5}{6}$  \_\_\_\_\_

12.  $4\frac{1}{2} \times 3\frac{1}{3}$  \_\_\_\_\_

13.  $5\frac{1}{2} \times 2\frac{5}{6}$  \_\_\_\_\_

14.  $1\frac{1}{5} \times 10$  \_\_\_\_\_

15.  $2\frac{3}{5} \times 2\frac{3}{10}$  \_\_\_\_\_

16.  $1\frac{5}{8} \times 2\frac{3}{4}$  \_\_\_\_\_

17.  $2\frac{2}{3} \times 3\frac{1}{2}$  \_\_\_\_\_

18.  $4\frac{5}{8} \times 3\frac{1}{3}$  \_\_\_\_\_

19.  $1\frac{8}{15} \times 1\frac{4}{5}$  \_\_\_\_\_

20.  $3\frac{1}{3} \times 1\frac{4}{5}$  \_\_\_\_\_

### Test Prep

21. What is  $1\frac{7}{8} \times 2\frac{4}{5}$  written in simplest form?

A  $5\frac{1}{4}$

C  $\frac{105}{20}$

B  $\frac{21}{4}$

D  $\frac{210}{40}$

22. Robert needs  $8\frac{1}{3}$  feet of board to make one bookcase. How long of a piece would he need to make 3 bookcases?

# Divide Fractions

Find the reciprocal of each number.

1.  $\frac{1}{3}$  \_\_\_\_\_

2.  $\frac{5}{6}$  \_\_\_\_\_

3. 7 \_\_\_\_\_

4.  $1\frac{1}{2}$  \_\_\_\_\_

5.  $2\frac{3}{4}$  \_\_\_\_\_

6. 5 \_\_\_\_\_

7.  $\frac{15}{16}$  \_\_\_\_\_

8. 4 \_\_\_\_\_

9.  $2\frac{5}{6}$  \_\_\_\_\_

Find each quotient. Write each quotient in simplest form.

10.  $\frac{1}{2} \div \frac{1}{4}$  \_\_\_\_\_

11.  $\frac{2}{3} \div \frac{4}{9}$  \_\_\_\_\_

12.  $\frac{7}{8} \div 4$  \_\_\_\_\_

13.  $\frac{2}{3} \div \frac{1}{2}$  \_\_\_\_\_

14.  $\frac{15}{16} \div \frac{5}{8}$  \_\_\_\_\_

15.  $\frac{9}{10} \div \frac{3}{4}$  \_\_\_\_\_

16.  $8 \div \frac{4}{5}$  \_\_\_\_\_

17.  $\frac{6}{7} \div \frac{14}{21}$  \_\_\_\_\_

18.  $\frac{5}{8} \div 16$  \_\_\_\_\_

**Algebra • Equations** Find a value for  $n$  that makes each equation true.

19.  $\frac{3}{4} \div \frac{2}{3} = n$  \_\_\_\_\_

20.  $\frac{2}{3} \div n = \frac{3}{4}$  \_\_\_\_\_

21.  $n \div \frac{10}{21} = 1\frac{3}{4}$  \_\_\_\_\_

## Test Prep

22. Which multiplication problem is the same as the division problem  $\frac{2}{3} \div \frac{8}{9}$ ?

A  $\frac{2}{3} \times \frac{8}{9}$

C  $\frac{3}{2} \times \frac{8}{9}$

B  $\frac{2}{3} \times \frac{9}{8}$

D  $\frac{3}{2} \times \frac{9}{8}$

23. Explain how to find the reciprocal of the number  $m$ .

\_\_\_\_\_

**Practice**

For use after 7-6

Choose a calculator, paper and pencil, or mental math to simplify each fraction.

1.  $\frac{8}{12}$  \_\_\_\_\_

2.  $\frac{15}{60}$  \_\_\_\_\_

3.  $\frac{54}{108}$  \_\_\_\_\_

4.  $\frac{132}{144}$  \_\_\_\_\_

5.  $\frac{17}{51}$  \_\_\_\_\_

6.  $\frac{26}{78}$  \_\_\_\_\_

7.  $\frac{27}{45}$  \_\_\_\_\_

8.  $\frac{42}{45}$  \_\_\_\_\_

9.  $\frac{87}{96}$  \_\_\_\_\_

10.  $\frac{156}{176}$  \_\_\_\_\_

11.  $\frac{65}{135}$  \_\_\_\_\_

12.  $\frac{81}{153}$  \_\_\_\_\_

13.  $\frac{96}{180}$  \_\_\_\_\_

14.  $\frac{132}{187}$  \_\_\_\_\_

15.  $\frac{195}{615}$  \_\_\_\_\_

16.  $\frac{324}{513}$  \_\_\_\_\_

Write each fraction in simplest form.

17.  $\frac{56}{64}$  \_\_\_\_\_

18.  $\frac{45}{75}$  \_\_\_\_\_

19.  $\frac{24}{32}$  \_\_\_\_\_

20.  $\frac{10}{15}$  \_\_\_\_\_

21.  $\frac{56}{70}$  \_\_\_\_\_

22.  $\frac{48}{64}$  \_\_\_\_\_

23.  $\frac{54}{135}$  \_\_\_\_\_

24.  $\frac{144}{252}$  \_\_\_\_\_

25.  $\frac{42}{112}$  \_\_\_\_\_

26.  $\frac{100}{125}$  \_\_\_\_\_

27.  $\frac{160}{176}$  \_\_\_\_\_

28.  $\frac{120}{216}$  \_\_\_\_\_

29.  $\frac{85}{136}$  \_\_\_\_\_

30.  $\frac{216}{408}$  \_\_\_\_\_

31.  $\frac{192}{368}$  \_\_\_\_\_

32.  $\frac{180}{765}$  \_\_\_\_\_

Circle A, B, C, or D. Which fraction is *not* equivalent to the given fraction?

33.  $\frac{3}{4}$

A.  $\frac{12}{16}$

B.  $\frac{9}{13}$

C.  $\frac{15}{20}$

D.  $\frac{18}{24}$

34.  $\frac{4}{5}$

A.  $\frac{40}{50}$

B.  $\frac{44}{55}$

C.  $\frac{35}{45}$

D.  $\frac{48}{60}$

# Terminating and Repeating Decimals

Write each fraction as a decimal. Use a bar as needed.

1.  $\frac{9}{20}$  \_\_\_\_\_

2.  $\frac{3}{10}$  \_\_\_\_\_

3.  $\frac{7}{12}$  \_\_\_\_\_

4.  $\frac{4}{5}$  \_\_\_\_\_

5.  $\frac{2}{3}$  \_\_\_\_\_

6.  $\frac{5}{6}$  \_\_\_\_\_

7.  $\frac{1}{6}$  \_\_\_\_\_

8.  $\frac{15}{16}$  \_\_\_\_\_

9.  $\frac{2}{15}$  \_\_\_\_\_

10.  $\frac{4}{11}$  \_\_\_\_\_

11.  $\frac{5}{8}$  \_\_\_\_\_

12.  $\frac{13}{16}$  \_\_\_\_\_

13.  $\frac{3}{25}$  \_\_\_\_\_

14.  $\frac{4}{9}$  \_\_\_\_\_

15.  $\frac{8}{9}$  \_\_\_\_\_

16.  $\frac{11}{16}$  \_\_\_\_\_

17.  $\frac{14}{25}$  \_\_\_\_\_

18.  $\frac{11}{15}$  \_\_\_\_\_

## Test Prep

19. Which of the following is the decimal equivalent for  $\frac{14}{15}$ ?

A 0.9

C 0.933

B 0.93

D  $0.9\bar{3}$ 

20. Is  $\frac{1}{32}$  a repeating decimal or a terminating decimal? How do you know?

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# Perimeter and Area of Rectangles and Squares

$P = L + L + W + W$   
 $A = (L \times 2) + (W \times 2)$

Find the perimeter and the area of each rectangle.

1.  $l = 8$  yd

$w = 10$  yd

\_\_\_\_\_

\_\_\_\_\_

2.  $l = 15.6$  m

$w = 12.7$  m

\_\_\_\_\_

\_\_\_\_\_

3.  $l = 14$  in.

$w = 14$  in.

\_\_\_\_\_

\_\_\_\_\_

4.  $l = 18.5$  cm

$w = 22.6$  cm

\_\_\_\_\_

\_\_\_\_\_

5.  $l = 150$  ft

$w = 240$  ft

\_\_\_\_\_

\_\_\_\_\_

6.  $l = 8$  km

$w = 12.4$  km

\_\_\_\_\_

\_\_\_\_\_

7.  $l = 18.5$  m

$w = 25.7$  m

\_\_\_\_\_

\_\_\_\_\_

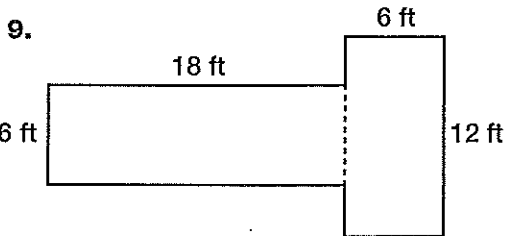
8.  $l = 3\frac{1}{2}$  ft

$w = 4\frac{1}{3}$  ft

\_\_\_\_\_

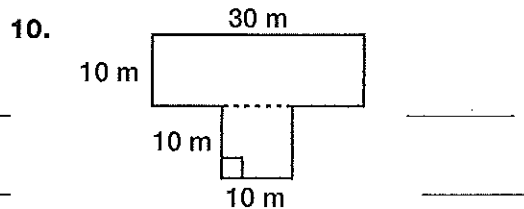
\_\_\_\_\_

Find the perimeter and area of each figure.



\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

Use the conversion table at the right for Problems 11–14.

11.  $35 \text{ ft}^2 = \text{_____} \text{ in.}^2$

12.  $12 \text{ yd}^2 = \text{_____} \text{ ft}^2$

13.  $\text{_____} \text{ ft}^2 = 720 \text{ in.}^2$

14.  $25 \text{ yd}^2 = \text{_____} \text{ ft}^2$

$1 \text{ ft}^2 = 144 \text{ in.}^2$
$1 \text{ yd}^2 = 9 \text{ ft}^2$

**Test Prep**

15. What is the perimeter of a rectangle with a length of 14 meters and a width of 16 meters?

A 30 m

C 224 m

B 60 m

D Not here

16. A garden measures 14 feet  $\times$  20 feet. A fence is to be placed on all sides except one of the shorter sides. How much fence is needed?

\_\_\_\_\_