

Name \_\_\_\_\_

# Math Summer 2018 Packet

For Incoming 6<sup>th</sup> Grade Students to SSA+S



Students are required to show work for full credit.

This packet is due Friday, August 17<sup>th</sup>, 2018

A test will be given on the material in this packet.

Most answers can be accessed through [bigideasmath.com](http://bigideasmath.com).

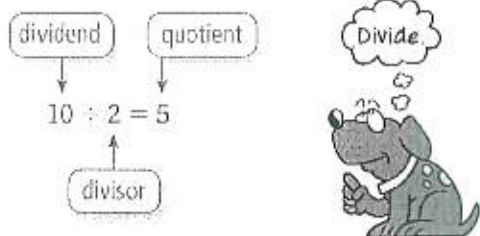
Choose <Looking for Easy Access Materials?>. Navigate to the Florida Textbook and Choose <Skills Review Handbook>.

Username and Passwords are not required.

## REVIEW: Dividing Whole Numbers

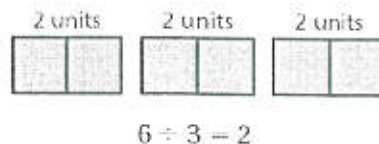
Name \_\_\_\_\_

## Key Concept and Vocabulary



## Visual Model

If you divide  
6 units into  
3 equal parts,  
each part will  
have 2 units.



## Skill Examples

1.  $42 \div 6 = 7$       2.  $\frac{65}{13} = 65 \div 13 = 5$

3.  $\frac{13}{15 \overline{)195}}$        $\div \cdot 195 \div 15 = 13$

$$\begin{array}{r} 13 \\ 15 \overline{)195} \\ \underline{45} \\ 45 \\ \underline{0} \end{array}$$

## Application Example

4. Six people find a treasure worth \$12,300. If each person receives an equal share, how much does each person get?

$$\$12,300 \div 6 = \$2050$$

- $\div \cdot$  Each person gets \$2050.

## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

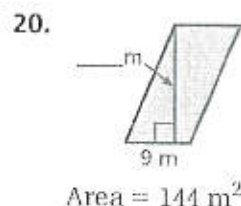
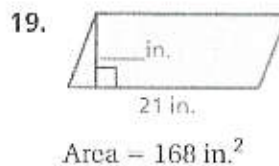
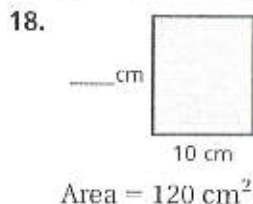
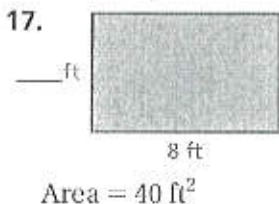
Find the quotient.

5.  $56 \div 8 =$  \_\_\_\_\_      6.  $99 \div 11 =$  \_\_\_\_\_      7.  $132 \div 6 =$  \_\_\_\_\_      8.  $80 \div 5 =$  \_\_\_\_\_

9.  $\frac{88}{4} =$  \_\_\_\_\_      10.  $\frac{156}{3} =$  \_\_\_\_\_      11.  $\frac{430}{86} =$  \_\_\_\_\_      12.  $\frac{3082}{23} =$  \_\_\_\_\_

13.  $18 \overline{)216}$       14.  $12 \overline{)960}$       15.  $9 \overline{)567}$       16.  $19 \overline{)323}$

Find the height of the rectangle or parallelogram.



21. **PARTY PUNCH** A punch bowl contains 6 quarts of punch. There are 32 fluid ounces in a quart. How many 4-fluid ounce cups will the punch bowl serve? \_\_\_\_\_
22. **SHARING THE PROFIT** You and three friends start a small business. Your total income is \$820 and your total expenses are \$360. You share the profit evenly. How much do each of you get? Explain. \_\_\_\_\_

## REVIEW: Order of Operations

Name \_\_\_\_\_

## Key Concept and Vocabulary

"Please Excuse My Dear Aunt Sally"

- 1st Parentheses  
 2nd Exponents  
 3rd Multiplication and Division (from left to right)  
 4th Addition and Subtraction (from left to right)

Simplify  $4^2 \div 2 + 3(9 - 5)$ .

$$\begin{aligned} 4^2 \div 2 + 3(9 - 5) &= 4^2 \div 2 + 3 \cdot 4 \\ &= 16 \div 2 + 3 \cdot 4 \\ &= 8 + 12 \\ &= 20 \end{aligned}$$

Order of Operations



## Skill Examples

- $18 \div 2 - 4 = 9 - 4 = 5$
- $12 \cdot (6 - 2) = 12 \cdot 4 = 48$
- $14 \cdot 3 - 19 = 42 - 19 = 23$
- $20 \div 10 + 21 \cdot 5 = 2 + 105 = 107$
- $(2 + 3)^2 - 5 = 25 - 5 = 20$

## Application Example

6. At a museum, 4 adults pay \$5 each and 6 children pay \$3 each. What is the total cost of the tickets?

$$\begin{aligned} 4 \cdot 5 + 6 \cdot 3 &= 20 + 18 \\ &= 38 \end{aligned}$$


 The total cost is \$38.

## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Simplify.

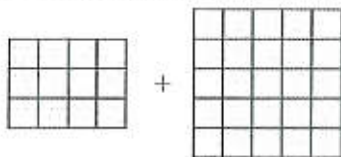
- $3^2 + 5(4 - 2) =$  \_\_\_\_\_
- $3 + 4 \div 2 =$  \_\_\_\_\_
- $10 \div 5 \cdot 3 =$  \_\_\_\_\_
- $4(3^3 - 8) \div 2 =$  \_\_\_\_\_
- $3 \cdot 6 - 4 \div 2 =$  \_\_\_\_\_
- $12 + 7 \cdot 3 - 24 =$  \_\_\_\_\_

Insert parentheses to make the statement true.

- $5^2 - 15 \div 5 = 2$
- $12 \cdot 2^3 + 4 = 144$
- $91 - 21 \div 7 = 10$

Write an expression for the total area of the two rectangles. Evaluate your expression.

16.



17.



18. **ADMISSION** At a baseball game, 6 adults pay \$20 each and 4 children pay \$10 each. What is the total cost of the tickets? \_\_\_\_\_

19. **INSERTING PARENTHESES** Insert parentheses in the expression  $4 + 2^3 - 5 \cdot 2$  in two ways: (a) so that the value is 10 and (b) so that the value is 14.

(a) \_\_\_\_\_

(b) \_\_\_\_\_

## REVIEW: Simplifying Fractions

Name \_\_\_\_\_

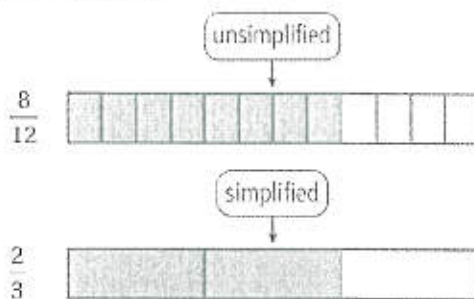
## Key Concept and Vocabulary

$$\frac{8}{12} = \frac{2 \cdot 4}{3 \cdot 4} = \frac{2}{3}$$

Divide numerator  
and denominator  
by common factor.



## Visual Model



## Skill Examples

1.  $\frac{2}{4} = \frac{1 \cdot 2}{2 \cdot 2} = \frac{1}{2}$

2.  $\frac{3}{6} = \frac{1 \cdot 3}{2 \cdot 3} = \frac{1}{2}$

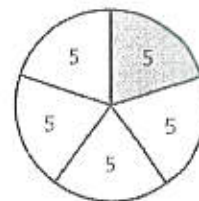
3.  $\frac{15}{20} = \frac{3 \cdot 5}{4 \cdot 5} = \frac{3}{4}$

4.  $\frac{80}{100} = \frac{4 \cdot 20}{5 \cdot 20} = \frac{4}{5}$

## Application Example

5. Five of the 25 students in your class have a Facebook account. Write this fraction in simplified form.

$$\frac{5}{25} = \frac{1 \cdot 5}{5 \cdot 5} = \frac{1}{5}$$



- One-fifth of your class has a Facebook account.



## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Simplify the fraction.

6.  $\frac{16}{18} = \underline{\hspace{2cm}}$

7.  $\frac{10}{12} = \underline{\hspace{2cm}}$

8.  $\frac{6}{8} = \underline{\hspace{2cm}}$

9.  $\frac{15}{45} = \underline{\hspace{2cm}}$

10.  $\frac{12}{40} = \underline{\hspace{2cm}}$

11.  $\frac{14}{21} = \underline{\hspace{2cm}}$

12.  $\frac{6}{2} = \underline{\hspace{2cm}}$

13.  $\frac{20}{50} = \underline{\hspace{2cm}}$

14.  $\frac{12}{30} = \underline{\hspace{2cm}}$

15.  $\frac{20}{15} = \underline{\hspace{2cm}}$

16.  $\frac{75}{85} = \underline{\hspace{2cm}}$

17.  $\frac{21}{35} = \underline{\hspace{2cm}}$

Shade the model so that the fraction is simplified.

18. =

19. =

20. **FACEBOOK** Eight of the 24 students in your class have a Facebook account. Write this fraction in simplified form. \_\_\_\_\_

21. **SIMPLIFYING** Write five different fractions that each simplify to two-fifths.
- \_\_\_\_\_

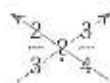
## REVIEW: Comparing and Ordering Fractions

Name \_\_\_\_\_

### Key Concept and Vocabulary

$2 \cdot 4 = 8$

$3 \cdot 3 = 9$



Find products.

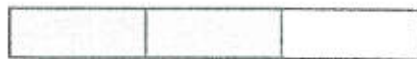
Comparing Fractions

$\frac{2}{3} < \frac{3}{4}$  because  $8 < 9$ .



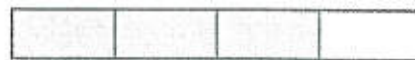
### Visual Model

$\frac{2}{3}$



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

$\frac{3}{4}$



### Skill Examples

- $\frac{1}{2} > \frac{5}{11}$  because  $1 \cdot 11 > 2 \cdot 5$ .
- $\frac{3}{6} = \frac{1}{2}$  because  $3 \cdot 2 = 6 \cdot 1$ .
- $\frac{3}{8} < \frac{2}{5}$  because  $3 \cdot 5 < 8 \cdot 2$ .
- $\frac{4}{9} > \frac{3}{7}$  because  $4 \cdot 7 > 9 \cdot 3$ .

### Application Example

5. You run seven-eighths mile. Your friend runs eight-tenths mile. Who runs farther?

$$\frac{7}{8} > \frac{8}{10} \text{ because } 7 \cdot 10 > 8 \cdot 8.$$

∴ You run farther.

## PRACTICE MAKES PURR-FECT™



Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Compare the fractions using  $<$ ,  $>$ , or  $=$ .

6.  $\frac{4}{5} \square \frac{8}{11}$

7.  $\frac{6}{7} \square \frac{5}{6}$

8.  $\frac{6}{7} \square \frac{7}{8}$

9.  $\frac{3}{11} \square \frac{6}{22}$

10.  $\frac{9}{2} \square \frac{14}{3}$

11.  $\frac{3}{9} \square \frac{1}{3}$

12.  $\frac{4}{9} \square \frac{9}{20}$

13.  $\frac{7}{12} \square \frac{4}{7}$

14.  $\frac{2}{9} \square \frac{4}{18}$

15.  $\frac{3}{8} \square \frac{4}{11}$

16.  $\frac{7}{5} \square \frac{13}{9}$

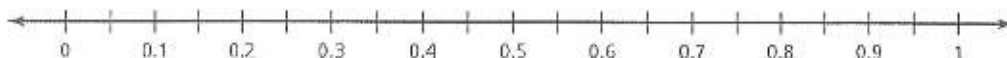
17.  $\frac{6}{5} \square \frac{11}{10}$

Compare the fractions models using  $<$ ,  $>$ , or  $=$ .



20. **MILK** You drink six-eighths of a quart of milk. Your friend pours a quart of milk into four 8-fluid ounce glasses and drinks three of them. Who drinks more? \_\_\_\_\_

21. **ORDERING FRACTIONS** Order the fractions from least to greatest and graph them on a number line:  $\frac{3}{8}$ ,  $\frac{1}{4}$ ,  $\frac{1}{3}$ , and  $\frac{2}{5}$ .



**REVIEW:** Adding and Subtracting Fractions with Unlike Denominators

Name \_\_\_\_\_


**Key Concept and Vocabulary**

Find products.

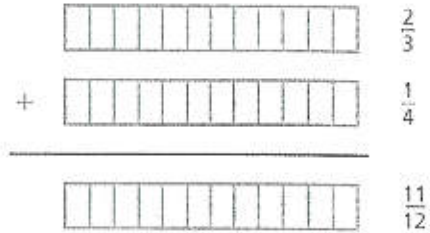
$$\frac{2}{3} \times \frac{1}{4} = \frac{2 \cdot 1}{3 \cdot 4} = \frac{2 \cdot 4 + 3 \cdot 1}{3 \cdot 4} = \frac{11}{12}$$

$$\frac{2}{3} \times \frac{1}{4} = \frac{2 \cdot 1}{3 \cdot 4} = \frac{2 \cdot 4 - 3 \cdot 1}{3 \cdot 4} = \frac{5}{12}$$

Unlike Denominators



**Visual Model**



**Skill Examples**

- $\frac{1}{5} + \frac{2}{3} = \frac{1 \cdot 3 + 5 \cdot 2}{5 \cdot 3} = \frac{13}{15}$
- $\frac{1}{2} + \frac{1}{4} = \frac{1 \cdot 4 + 2 \cdot 1}{2 \cdot 4} = \frac{6}{8} = \frac{3}{4}$
- $\frac{1}{3} - \frac{1}{4} = \frac{1 \cdot 4 - 3 \cdot 1}{3 \cdot 4} = \frac{1}{12}$
- $\frac{3}{7} - \frac{2}{5} = \frac{3 \cdot 5 - 7 \cdot 2}{7 \cdot 5} = \frac{1}{35}$

**Application Example**

- You ride your bike  $\frac{3}{8}$  mile to the store. Then you ride  $\frac{1}{6}$  mile to school. How far do you ride altogether?

$$\frac{3}{8} + \frac{1}{6} = \frac{3 \cdot 6 + 8 \cdot 1}{8 \cdot 6} = \frac{26}{48} = \frac{13}{24}$$



∴ You ride  $\frac{13}{24}$  mile.

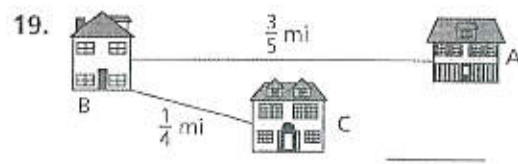
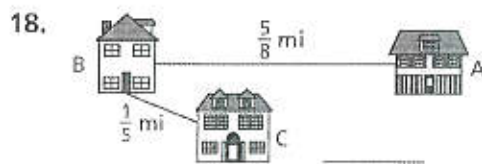
**PRACTICE MAKES PURR-FECT™**

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Find the sum or difference. Write your answer in simplified form.

- $\frac{1}{3} + \frac{1}{8} =$  \_\_\_\_\_
- $\frac{2}{3} + \frac{1}{5} =$  \_\_\_\_\_
- $\frac{3}{10} + \frac{1}{4} =$  \_\_\_\_\_
- $\frac{1}{2} + \frac{2}{5} =$  \_\_\_\_\_
- $\frac{3}{7} + \frac{1}{3} =$  \_\_\_\_\_
- $\frac{1}{8} + \frac{2}{5} =$  \_\_\_\_\_
- $\frac{5}{8} - \frac{1}{3} =$  \_\_\_\_\_
- $\frac{5}{6} - \frac{3}{5} =$  \_\_\_\_\_
- $\frac{5}{9} - \frac{2}{5} =$  \_\_\_\_\_
- $\frac{7}{10} - \frac{1}{4} =$  \_\_\_\_\_
- $\frac{3}{5} - \frac{1}{6} =$  \_\_\_\_\_
- $\frac{1}{5} - \frac{1}{6} =$  \_\_\_\_\_

Find the total distance from House A to House B and then to House C.



20. **WEASEL LENGTH** Find the total length of the weasel. \_\_\_\_\_



21. **IMPROVING YOUR SPEED** You swam at a rate of  $\frac{3}{8}$  mile per hour in March. You swam at a rate of  $\frac{3}{7}$  mile per hour in April. How much faster did you swim in April? \_\_\_\_\_

## REVIEW: Multiplying Fractions

Name \_\_\_\_\_

## Key Concept and Vocabulary

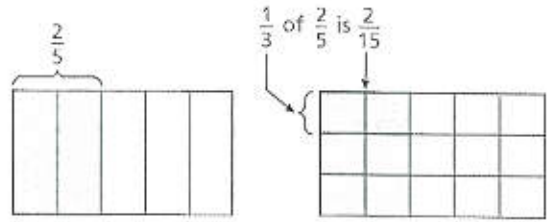
Multiply numerators.

$$\frac{1}{3} \cdot \frac{2}{5} = \frac{1 \cdot 2}{3 \cdot 5} = \frac{2}{15}$$

Multiply denominators.



## Visual Model



## Skill Examples

- $\frac{2}{3} \cdot \frac{1}{4} = \frac{2 \cdot 1}{3 \cdot 4} = \frac{2}{12} = \frac{1}{6}$
- $\frac{3}{8} \times \frac{2}{9} = \frac{3 \cdot 2}{8 \cdot 9} = \frac{6}{72} = \frac{1}{12}$
- $\left(\frac{2}{5}\right)\left(\frac{1}{4}\right) = \frac{2 \cdot 1}{5 \cdot 4} = \frac{2}{20} = \frac{1}{10}$
- $\frac{1}{7} \cdot \frac{3}{5} = \frac{1 \cdot 3}{7 \cdot 5} = \frac{3}{35}$

## Application Example

- A recipe calls for three-fourths cup of flour. You want to make one-half of the recipe. How much flour should you use?

$$\frac{1}{2} \cdot \frac{3}{4} = \frac{1 \cdot 3}{2 \cdot 4} = \frac{3}{8}$$

∴ You should use  $\frac{3}{8}$  cup flour.

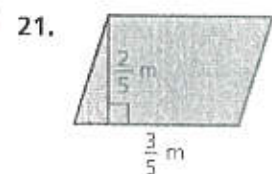
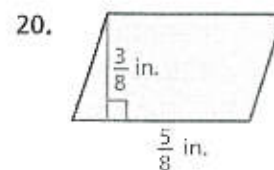
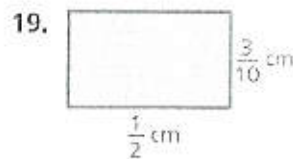
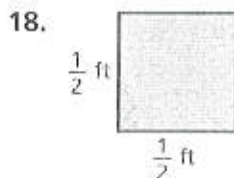
## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Find the product. Write your answer in simplified form.

- $\frac{1}{3} \cdot \frac{2}{7} =$  \_\_\_\_\_
- $\frac{1}{2} \times \frac{1}{4} =$  \_\_\_\_\_
- $\frac{1}{10} \cdot \frac{3}{10} =$  \_\_\_\_\_
- $\frac{3}{2} \times \frac{2}{5} =$  \_\_\_\_\_
- $\frac{3}{8} \times \frac{1}{2} =$  \_\_\_\_\_
- $\left(\frac{1}{5}\right)\left(\frac{2}{5}\right) =$  \_\_\_\_\_
- $\left(\frac{2}{3}\right)^2 =$  \_\_\_\_\_
- $\frac{3}{2} \cdot \frac{2}{3} =$  \_\_\_\_\_
- $\left(\frac{3}{1}\right)\left(\frac{1}{3}\right) =$  \_\_\_\_\_
- $2 \cdot \frac{1}{4} =$  \_\_\_\_\_
- $3 \times \frac{3}{4} =$  \_\_\_\_\_
- $\frac{1}{3} \cdot \frac{3}{4} \cdot \frac{4}{5} =$  \_\_\_\_\_

Find the area of the rectangle or parallelogram.



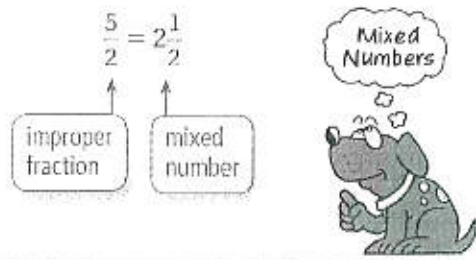
22. **OPEN-ENDED** Find three different pairs of fractions that have the same product.

$$\square \cdot \square = \square \quad \square \cdot \square = \square \quad \square \cdot \square = \square$$

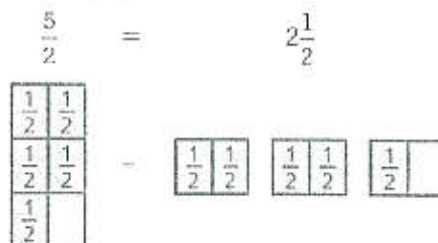
## REVIEW: Mixed Numbers and Improper Fractions

Name \_\_\_\_\_

### Key Concept and Vocabulary



### Visual Model

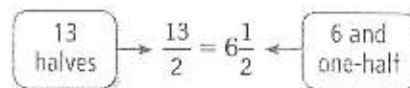


### Skill Examples

- $\frac{7}{3} = 2\frac{1}{3}$
- $\frac{8}{4} = 2$
- $2\frac{1}{4} = \frac{8}{4} + \frac{1}{4} = \frac{9}{4}$
- $3\frac{3}{5} = \frac{15}{5} + \frac{3}{5} = \frac{18}{5}$

### Application Example

- During a month, you used 13 half-hours of phone time. How many hours did you use?



∴ You used  $6\frac{1}{2}$  hours.

## PRACTICE MAKES PURR-FECT™



Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Write the improper fraction as a mixed number.

- $\frac{4}{3} =$  \_\_\_\_\_
- $\frac{3}{2} =$  \_\_\_\_\_
- $\frac{8}{3} =$  \_\_\_\_\_
- $\frac{9}{6} =$  \_\_\_\_\_
- $\frac{7}{4} =$  \_\_\_\_\_
- $\frac{28}{3} =$  \_\_\_\_\_
- $\frac{19}{4} =$  \_\_\_\_\_
- $\frac{11}{2} =$  \_\_\_\_\_

Write the mixed number as an improper fraction.

- $2\frac{2}{3} =$  \_\_\_\_\_
- $5\frac{1}{4} =$  \_\_\_\_\_
- $3\frac{2}{5} =$  \_\_\_\_\_
- $1\frac{3}{8} =$  \_\_\_\_\_

- Rewrite the sentence using a mixed number. Susan drinks five-fourths of a quart of milk.  
\_\_\_\_\_

- Rewrite the sentence using an improper fraction. Tom runs for 2 and one quarter hours.  
\_\_\_\_\_

- NUMBER LINE** Graph the improper fractions on the number line:  $\frac{5}{3}$ ,  $\frac{7}{2}$ , and  $\frac{13}{3}$ .





## REVIEW: Decimal Place Value

Name \_\_\_\_\_

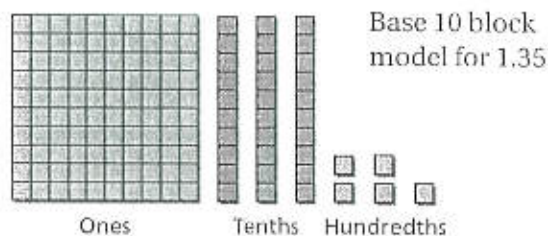
**Key Concept and Vocabulary**

thousands    hundreds    tens    ones    tenths    hundredths    thousandths    ten-thousandths    hundred-thousandths    millionths

2,346,783.3409

Place Values

## Visual Model

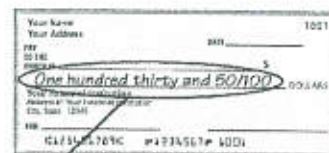


## Skill Examples

- 156 = "One hundred fifty-six"
- 1409 = "One thousand four hundred nine"
- 14.009 = "Fourteen *and* nine thousandths"
- 2.07 = "Two *and* seven hundredths"

## Application Example

- You are writing a check for \$130.50. Write this amount in words.



- ❖ One hundred thirty *and* 50/100.

PRACTICE MAKES *PURR*-FECT™Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

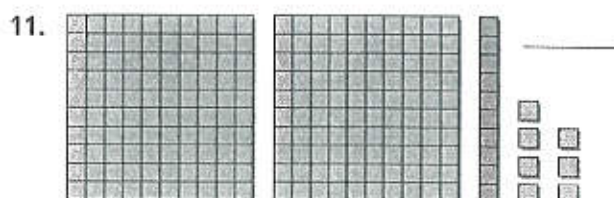
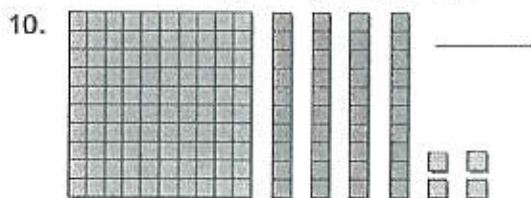
Write the number in words.

- 27.35 = \_\_\_\_\_
- 1560 = \_\_\_\_\_

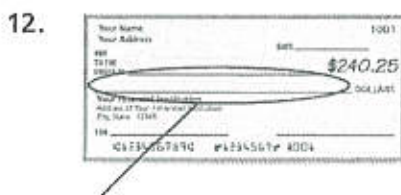
Write the decimal number for the words.

- "Five thousand seven hundred forty-nine *and* thirteen hundredths" = \_\_\_\_\_
- "Nine hundred eighteen *and* fifty-seven thousandths" = \_\_\_\_\_

Write the decimal given by the model.



Write the words for the check.



## REVIEW: Adding and Subtracting Decimals

Name \_\_\_\_\_

### Key Concept and Vocabulary

$$\begin{array}{r} 5.7 \\ + 3.36 \\ \hline 9.06 \end{array}$$

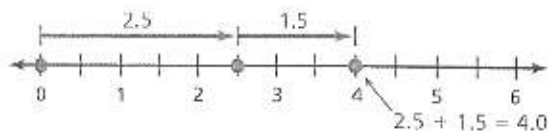
$$\begin{array}{r} 12.72 \\ - 3.84 \\ \hline 8.88 \end{array}$$

Align on decimal point.

Adding and Subtracting



### Visual Model



### Skill Examples

$$\begin{array}{r} 1. \quad 134.12 \\ + 25.485 \\ \hline 159.605 \end{array}$$

$$\begin{array}{r} 2. \quad 0.135 \\ + 0.14 \\ \hline 0.275 \end{array}$$

$$\begin{array}{r} 3. \quad 32.000 \\ - 9.451 \\ \hline 22.549 \end{array}$$

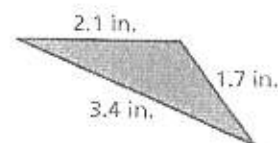
$$\begin{array}{r} 4. \quad 1.405 \\ - 0.55 \\ \hline 0.855 \end{array}$$

### Application Example

5. Find the perimeter of the triangle.

$$2.1 + 1.7 + 3.4 = 7.2$$

∴ The perimeter is 7.2 inches.



## PRACTICE MAKES PURR-FECT™

Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).

Find the sum or difference.

6.  $4.75 + 3.56 =$  \_\_\_\_\_

7.  $9.0 - 1.507 =$  \_\_\_\_\_

8.  $2.4 + 2.04 =$  \_\_\_\_\_

9.  $112.5 + 24.52 =$  \_\_\_\_\_

10.  $5.7 - 4.81 =$  \_\_\_\_\_

11.  $20 - 12.5 =$  \_\_\_\_\_

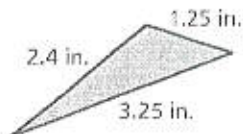
12.  $2.3 + 3.4 + 5.9 =$  \_\_\_\_\_

13.  $3.4 + 5.6 - 2.3 =$  \_\_\_\_\_

14.  $10.0 - (4.5 + 2.3) =$  \_\_\_\_\_

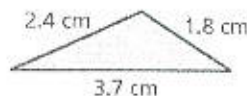
Find the perimeter of the triangle.

15.



Perimeter = \_\_\_\_\_

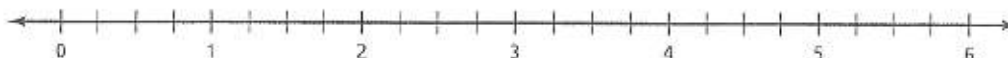
16.



Perimeter = \_\_\_\_\_

17. **SHOPPING** You take \$20 to the store. You buy a magazine for \$3.65 and a birthday card for \$5.29. How much money do you have left? \_\_\_\_\_

18. **NUMBER LINE** Show the sum graphically on the number line:  $1.75 + 3.5$ .



Honors Page: For students wanting to be considered for Math 6 Advanced  
Students are to complete this page without help. No calculators.

Solve each equation using inverse operations. Work must be shown.

1.  $3x = 12$

2.  $x + 5 = 31$

3.  $\frac{x}{3} = 12$

4.  $x - 15 = 27$

5.  $10 = \frac{x}{5}$

6.  $10 = 2.5x$

7.  $11 = 35 - x$

8.  $24 = \frac{3x}{4}$

9. Graph and Label each point on the Coordinate Plane provided.

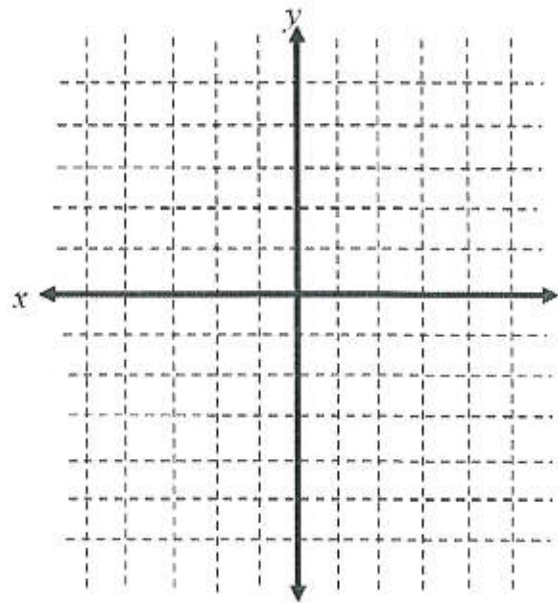
A.  $(3, -1)$

B.  $(0, 5)$

C.  $(-2, -3)$

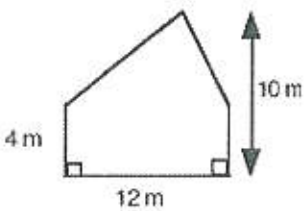
D.  $(-4, 0)$

E.  $(2, 1)$

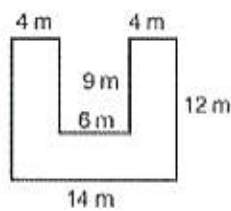


Find the area of each composite figure. Include proper units.

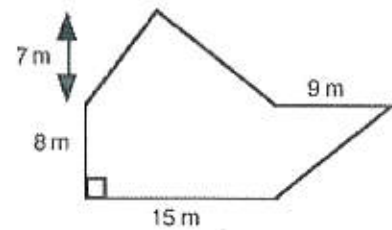
10.



11.



12.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_