Name _____ Date _____ Class _____

LESSON 9-1

Challenge

Customary Classroom Challenge

Find objects in your classroom for each unit of measure. Estimate first. Then measure.

LENGTH, WIDTH, OR HEIGHT

Object	Estimate	Actual
	_____ inches	_____ inches
	_____ inches	_____ inches
	_____ feet	_____ feet
	_____ feet	_____ feet
	_____ yards	_____ yards
	_____ yards	_____ yards

WEIGHT

Object	Estimate	Actual
	_____ ounces	_____ ounces
	_____ ounces	_____ ounces
	_____ pounds	_____ pounds
	_____ pounds	_____ pounds

CAPACITY

Object	Estimate	Actual
	_____ fluid ounces	_____ fluid ounces
	_____ cups	_____ cups
	_____ pints	_____ pints
	_____ quarts	_____ quarts

NAME _____ DATE _____ PERIOD ____

12-2 Study Guide and Intervention

Capacity and Weight in the Customary System

The most commonly used customary units of capacity are shown below.

Customary Units Of Capacity	
Unit	**Model**
1 **fluid ounce** (fl oz)	2 tablespoons of water
1 **cup** (c) = 8 fl oz	coffee cup
1 **pint** (pt) = 2 c	small ice cream container
1 **quart** (qt) = 2 pt	large measuring cup
1 **gallon** (gal) = 4 qt	large plastic jug of milk

- To change from larger units of length to smaller units, multiply.
- To change from smaller units of length to larger units, divide.

EXAMPLE 1 **Complete.**

2 gal = __?__ qt THINK 1 gallon = 4 quarts

$2 \times 4 = 8$ Multiply to change a larger unit to a smaller unit.

So, 2 gallons = 8 quarts.

The most commonly used customary units of weight are shown below.

Customary Units Of Weight	
Unit	**Model**
1 **ounce** (oz)	pencil
1 **pound** (lb) = 16 oz	package of notebook paper
1 **ton** (T) = 2,000 lb	small passenger car

EXAMPLE 2 **FOOD A box of cereal weighs 32 ounces. How many pounds is this?**

32 oz = __?__ lb THINK 16 ounces = 1 pound

$32 \div 16 = 2$ Divide to change ounces to pounds.

So, 32 ounces = 2 pounds.

EXERCISES

Complete.

1. 2 pt = __?__ c
2. 32 fl oz = __?__ c
3. 3 lb = __?__ oz
4. 16 qt = __?__ gal
5. $1\frac{1}{2}$ qt = __?__ pt
6. 3 T = __?__ lb
7. 16 c = __?__ qt
8. 2 gal = __?__ pt
9. 64 oz = __?__ lb

NAME _____ DATE _____ PERIOD ____

12-2

Practice: Skills

Capacity and Weight in the Customary System

Complete.

1. 2 lb = ___?___ oz

2. 3 gal = ___?___ qt

3. 40 fl oz = ___?___ c

4. 32 oz = ___?___ lb

5. 4 pt = ___?___ c

6. 16 pt = ___?___ qt

7. $2\frac{1}{2}$ pt = ___?___ c

8. 6 c = ___?___ pt

9. $1\frac{1}{2}$ T = ___?___ lb

10. 44 qt = ___?___ gal

11. $3\frac{3}{4}$ pt = ___?___ c

12. 3 gal = ___?___ pt

13. 10,000 lb = ___?___ T

14. 2 T = ___?___ oz

15. $1\frac{1}{2}$ qt = ___?___ c

16. $3\frac{1}{2}$ c = ___?___ fl oz

17. 96 oz = ___?___ lb

18. 64 fl oz = ___?___ c

19. 32,000 oz = ___?___ T

20. $2\frac{1}{2}$ lb = ___?___ oz

21. 11 qt = ___?___ gal

Choose the better estimate for each measure.

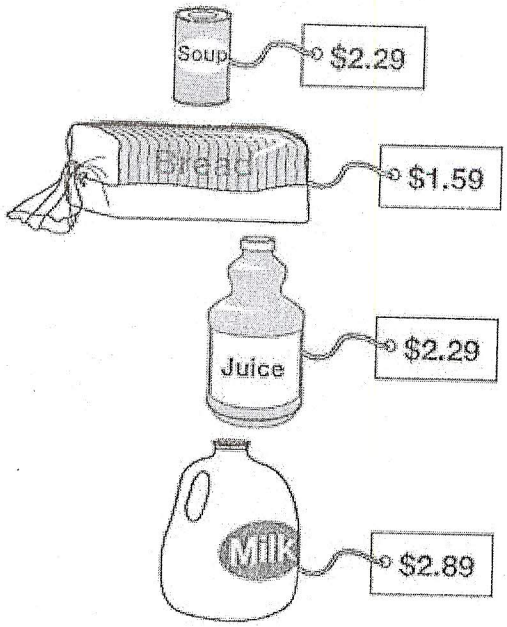
22. the weight of a bag of potatoes: 5 tons or 5 pounds

23. the amount of water in a sports bottle: 16 fluid ounces or 4 pints

24. the weight of an apple: $\frac{1}{2}$ pound or 32 ounces

Lesson 12–2

1 The prices of the items in Alana's grocery cart are pictured.



Alana has $10.00 to spend on the items. Which list of items could Alana purchase with her $10.00?

A 4 cans of soup, 1 loaf of bread, and 1 bottle of juice

B 1 loaf of bread, 3 bottles of juice, and 2 cans of soup

C 1 loaf of bread, 3 cans of soup, and 1 container of milk

D 2 cans of soup, 1 bottle of juice, and 1 container of milk

2 $3.2 \div 0.2 =$

A
2

B
16

C
64

D
160

3
Which is equal to $\frac{3}{2} \times \frac{3}{4}$?

A 2

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

C $\frac{1}{2}$

D $\frac{1}{8}$

6 Alexis needs to buy 300 sheets of construction paper. The office supply store sells construction paper in the following packages.

Paper Purchase

Package	Number of Sheets	Price
W	50	$4.50
X	75	$5.10
Y	100	$10.75
Z	150	$12.25

Which of the following is the *least* expensive way for Alexis to buy 300 sheets of construction paper?

A 6 packages of paper W

B 4 packages of paper X

C 3 packages of paper Y

D 2 packages of paper Z

7 Karl earns $8.50 per hour at his part-time job. Last week he worked 18 hours. This week he worked 14 hours. What is the total amount of money that Karl earned for working these two weeks?

A $119

B $153

C $261

D $272

8 **Sandra wants to buy 2 gallons of detergent. The table shows the sale price of four different brands of detergent.**

Detergent Sale Prices

Detergent	Quantity	Sales Price
Ultra Clean	1 gallon	$6.50
Fresh All	½ gallon	$2.00
Mega Wash	½ gallon	$3.10
No More Stains	2 gallons	$12.00

Which of the following is the *least* expensive way for Sandra to buy 2 gallons of detergent?

A Buying 4 bottles of Fresh All

B Buying 4 bottles of Mega Wash

C Buying 2 bottles of Ultra Clean

D Buying 1 bottle of No More Stains

9 $1\frac{5}{6} - \frac{1}{3} =$

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

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

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

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

Use this information to answer this question.

Calculators in Mrs. Camp's Class

Color	Number
Red	14
Blue	8
Yellow	6

10 According to the table, which shows the ratio of the number of red calculators to the number of blue calculators?

A $\frac{14}{8}$

B $\frac{8}{14}$

C $\frac{14}{28}$

D $\frac{8}{20}$

11 The ratio of boys to girls in Room B is 15 to 12. What is the ratio of girls to *total* students in Room B?

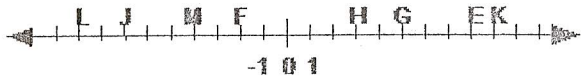
A 12 to 27

B 12 to 15

C 15 to 27

D 15 to 12

Use the number line below to answer this question.



12 Which letter represents the number *-9*?

A J

B E

C L

D K

13 Which of the following statements is true?

A $\frac{5}{12} \geq \frac{4}{7}$

B $\frac{4}{5} < \frac{7}{4}$

C $\frac{4}{9} = \frac{6}{12}$

D $\frac{6}{9} < \frac{3}{8}$

14 Which of the following is true?

A $-10 > -20$

B $-50 > 45$

C $-30 < -35$

D $25 < -45$

15 Which is equivalent to 1 liter?

A 25 milliliters

B 100 milliliters

C 250 milliliters

D 1,000 milliliters

16 Which of the following measurements is closest to 1 ton?

A 1,002 pounds

B 1,902 pounds

C 1,998 pounds

D 2,505 pounds

17 Anna rode her bicycle 12.4 kilometers. How many meters did she ride?

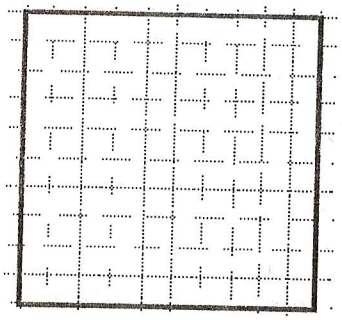
A 0.124 meter
B 1,240 meters
C 12,400 meters
D 124,000 meters

18 537 grams is equivalent to what other measurement?

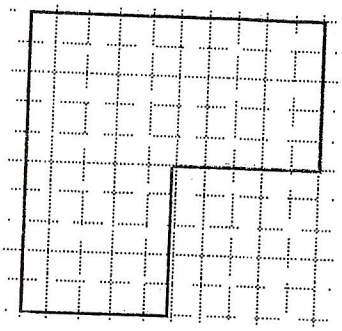
A 0.0537 kilograms
B 0.537 kilograms
C about 2 pounds
D 0.244 kilograms

Use this information to answer this question.

This square has an area of 100 square feet.



19 What is the best estimate of the area of this figure?



A 25 sq. ft.

B 50 sq. ft.

C 75 sq. ft.

D 100 sq. ft.

20 A 2 quart bottle will hold about how many liters?

A
1 liter

B
2 liters

C
4 liters

D
8 liters

Use this table to answer this question.

A video store manager of 10 stores recorded how many customers were at each store last Saturday. His data is shown in this table:

Store	Number of People
A	68
B	45
C	120
D	76
E	88
F	52
G	45
H	120
I	100
J	116

22 What is the mean of this data set?

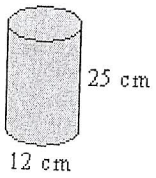
A
75

B
82

C
83

D
120

23 **If you were to measure the volume of this cylinder, what unit would you use to express your answer?**



A centimeters

B square centimeters

C cubic centimeters

D meters

24 **If you buy a 2-liter soda at the grocery store, about how many quarts of soda do you have?**

A 1 quart

B 2 quarts

C 4 quarts

D 8 quarts

25 **Which temperature is greatest?**

A -15 °C

B -10 °C

C -5 °C

D 0 °C

NAME _____ DATE _____ PERIOD _____

12-3 Practice: Skills

Length in the Metric System

Write the metric unit of length you would use to measure each of the following.

1. depth of an ocean

2. length of an eyelash

3. length of your bedroom

4. length of the Panama Canal

5. height of a can of soup

6. depth of a swimming pool

7. length of the eye of a needle

8. height of a washing machine

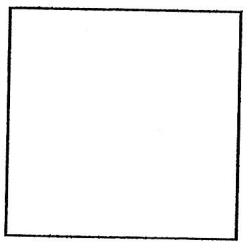
9. length of a pencil

10. width of a pencil

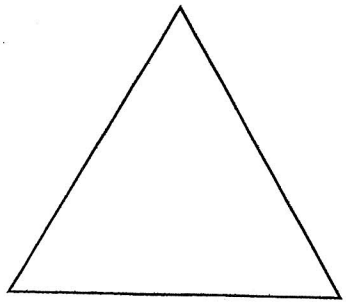
Measure each line segment or side of each figure in centimeters and millimeters.

11.

12. 

13. 

14. 

15. 

16. 

Name _____
Class Period _____
Date _____

Checking for Understanding
Unit Measurement and Decimals

1. Which measurement represents the ***least*** volume?
   a. 17 pints
   b. 2 gallons
   c. 35 cups
   d. 9 quarts

2. Which measurement represents a length ***shorter*** than 5 m?
   a. 6 yards
   b. 2 kilometers
   c. 36 inches
   d. 7000 millimeters

3. Which measurement represents the ***smallest*** weight?
   a. 1 kilogram
   b. 20 pounds
   c. 15 ounces
   d. 1000 milligrams

4. Which measurement represents the ***greatest*** length?
   a. 3 feet
   b. 27 inches
   c. 10 meters
   d. 98 centimeters

5. 12 meters = _____ centimeters

6. 2 tons = _____ pounds

7. 4 cups = _____pints

Look at the table.

Cost of T-shirts

Vendor	Cost per T-shirt
Al's T-shirt Shop	$6.99
T-shirt Connection	$7.49

How much more would a person pay for 4 T-shirts at T-shirt Connection than at Al's T-shirt Shop?

A $0.50
B $2.00
C $20.47
D $22.97

4.48 ÷ 70 =

F 15.63
G 6.4
H 0.156
J 0.064

0.01 $\overline{)2.86}$

F 2.86
G 286
H 2,860
J 28,600

Measurement Equivalents

- 1 tablespoon (tbsp) = 3 teaspoons (tsp)
- 1/16 cup (c) = 1 tablespoon
- 1/8 cup = 2 tablespoons
- 1/6 cup = 2 tablespoons + 2 teaspoons
- 1/4 cup = 4 tablespoons
- 1/3 cup = 5 tablespoons + 1 teaspoon
- 3/8 cup = 6 tablespoons
- 1/2 cup = 8 tablespoons
- 2/3 cup = 10 tablespoons + 2 teaspoons
- 3/4 cup = 12 tablespoons
- 1 cup = 48 teaspoons
- 1 cup= 16 tablespoons
- 8 fluid ounces (fl oz) = 1 cup
- 1 pint (pt) = 2 cups
- 1 quart (qt) = 2 pints
- 4 cups = 1 quart
- 1 gallon (gal) = 4 quarts
- 16 ounces (oz) = 1 pound (lb)
- 1 milliliter (ml) = 1 cubic centimeter (cc)
- 1 inch (in) = 2.54 centimeters (cm)

Metric Conversion Factors

Multiply	By	To Get
Fluid Ounces	29.57	grams
Ounces (dry)	28.35	grams
Grams	0.0353	ounces
Grams	0.0022	pounds
Kilograms	2.21	pounds
Pounds	453.6	grams
Pounds	0.4536	kilograms
Quarts	0.946	liters
Quarts (dry)	67.2	cubic inches
Quarts (liquid)	57.7	cubic inches
Liters	1.0567	quarts
Gallons	3,785	cubic centimeters
Gallons	3.785	liters

Name _____ Date _____ Class _____

LESSON 9-3

Reading Strategies

Reading a Table

Here is a table of customary units of measure.

Length	Weight	Capacity
1 foot = 12 inches	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 3 feet	1 ton = 2,000 pounds	1 pint = 2 cups

To change from large units of measure to small units, multiply.

Feet is a larger unit of measure than inches.

To change 3 feet to inches:

You know that one foot = 12 inches.

Multiply three feet times 12 (inches).

3 feet = 36 inches

Change three pints into cups. Use the table to help you answer the following questions.

1. How many cups are there in a pint?

_____

2. How many pints do you need to change into cups?

_____

3. How will you find the answer?

_____

To change from small units of measure to larger units, divide.

Change 32 ounces into cups. Ounces are a smaller unit of measure than cups. Use the table to help you answer each question.

4. How many ounces in a cup? _____

5. How many ounces do you need to change into cups? _____

6. How will you find the answer? _____

NAME _____ DATE _____ PERIOD ____

12-3 Study Guide and Intervention

Length in the Metric System

The meter is the basic unit of length in the metric system. The most commonly used metric units of length are shown below.

Metric Units of Length		
Unit	**Model**	**Benchmark**
1 **millimeter** (mm)	thickness of a dime	25 mm ≈ 1 inch
1 **centimeter** (cm)	half the width of a penny	2.5 cm ≈ 1 inch
1 **meter** (m)	width of a doorway	1 m ≈ 1.1 yard
1 **kilometer** (km)	six city blocks	1.6 km ≈ 1 mile

EXAMPLES **Write the metric unit of length that you would use to measure each of the following.**

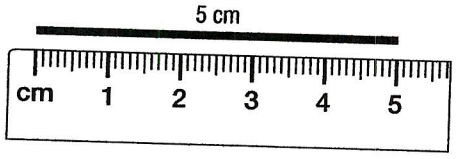
1 **height of a box of popcorn**

The height of a box of popcorn is more than the width of a penny, but less than the width of a doorway. So, the centimeter is an appropriate unit of measure.

2 **length of a car**

Since the length of a car is greater than the width of a doorway, but less than six city blocks, the meter is an appropriate unit of measure.

EXAMPLE 3 **Measure the length of the line segment in centimeters.**



The line segment is 5 cm.

EXERCISES

Write the metric unit of length that you would use to measure each of the following.

1. height of a mountain
2. thickness of a dried bean
3. length of a pen
4. height of a table

Measure each line segment in centimeters and millimeters.

5. _____
6. _____
7. _____
8. _____

Lesson 12–3

Name _____
Class Period _____
Date _____

Unit Conversion Practice

1. Which measurement represents the ***greatest*** volume?
   a. 17 pints
   b. 2 gallons
   c. 35 cups
   d. 9 quarts

2. Which measurement represents the ***greatest*** length?
   a. 6 feet
   b. 27 inches
   c. 1 meter
   d. 98 centimeters

3. Which measurement represents a length ***shorter*** than 5 cm?
   a. 1 foot
   b. 2 kilometers
   c. 3 inches
   d. 4 millimeters

4. Which measurement represents the ***smallest*** weight?
   a. 1 kilogram
   b. 20 pounds
   c. 15 ounces
   d. 1000 milligrams

NAME _____ DATE _____ PERIOD ____

12-1 Study Guide and Intervention

Length in the Customary System

The most commonly used customary units of length are shown below.

Customary Units Of Length	
Unit	**Model**
1 **inch** (in.)	width of a quarter
1 **foot** (ft) = 12 in.	length of a large adult foot
1 **yard** (yd) = 3 ft	length from nose to fingertip
1 **mile** (mi) = 1,760 yd	10 city blocks

- To change from larger units of length to smaller units, multiply.
- To change from smaller units of length to larger units, divide.

EXAMPLES **Complete.**

1 **3 yd = ? ft**

Since 1 yard = 3 feet, multiply by 3.
$3 \times 3 = 9$
So, 3 yards = 9 feet.

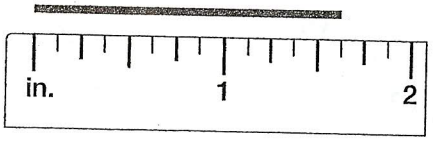
2 **24 in. = ? ft**

Since 1 foot = 12 inches, divide by 12.
$24 \div 12 = 2$
So, 24 inches = 2 feet.

Most rulers are divided into eighths of an inch, so you can measure to the nearest eighth inch.

EXAMPLE 3

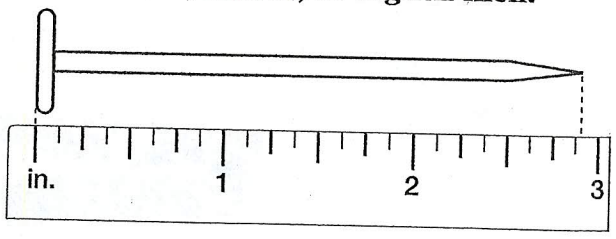
Draw a line segment measuring $1\frac{5}{8}$ inches.



Draw a line segment from 0 to $1\frac{5}{8}$.

EXAMPLE 4

Measure the length of the nail to the nearest half, fourth, or eighth inch.



The nail is between $2\frac{7}{8}$ inches and 3 inches.
It is closer to $2\frac{7}{8}$ inches.
The length of the nail is about $2\frac{7}{8}$ inches.

EXERCISES

Complete.

1. 3 ft = ? in.
2. 15 ft = ? yd
3. 2 mi = ? yd
4. Draw a line segment that is $\frac{3}{4}$ in. long.
5. Measure the length of the object to the nearest half, fourth, or eighth inch.

Lesson 12-1

NAME _____ DATE _____ PERIOD ____

12-1 Practice: Skills

Length in the Customary System

Complete.

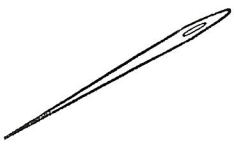
1. 2 ft = ___?___ in.
2. 5 yd = ___?___ ft
3. 18 ft = ___?___ yd
4. 60 in. = ___?___ ft
5. 3,520 yd = ___?___ mi
6. 36 in. = ___?___ yd
7. 3 yd = ___?___ in.
8. $3\frac{1}{2}$ yd = ___?___ ft
9. 2 mi = ___?___ ft

Draw a line segment of each length.

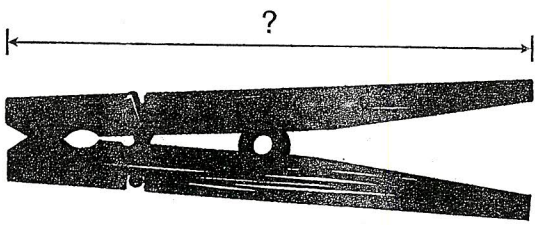
10. $3\frac{1}{2}$ in.
11. $1\frac{3}{4}$ in.
12. $2\frac{1}{8}$ in.
13. $1\frac{7}{8}$ in.
14. $2\frac{1}{4}$ in.
15. $\frac{5}{8}$ in.

For Exercises 16–18, find the length of each line segment or object to the nearest half, fourth, or eighth inch.

16.



17.



18.

19. Which is greater: $2\frac{1}{4}$ feet or 26 inches? Explain.

20. Which is greater: $3\frac{1}{3}$ yards or 12 feet? Explain.

Name _____ Date _____ Class _____

LESSON 9-3

Practice A

Converting Customary Units

Convert.

1. 1 yard = _____ feet
2. 1 mile = _____ yards
3. 1 pound = _____ ounces
4. 1 ton = _____ pounds
5. 1 pint = _____ cups
6. 1 quart = _____ pints
7. 1 quart = _____ cups
8. 1 gallon = _____ quarts
9. 24 inches = _____ feet
10. _____ pints = 4 quarts
11. _____ quarts = 2 gallons
12. 3 pounds = _____ ounces
13. 72 inches = _____ yards
14. 10,000 pounds = _____ tons

Compare. Write <, >, or = .

15. 28 inches ☐ 1 yard
16. 120 inches ☐ 10 feet
17. 2 pints ☐ 4 cups
18. 22 inches ☐ 2 feet

19. George's two rabbits each weigh 24 ounces. How many pounds do they weigh together?

_____

20. Loretta needs to add 2 gallons of water to her fish tank, but she only has a cup to measure the water. How many cups does she need to add?

_____

Name _____ Date _____ Class _____

LESSON 9-3

Practice B

Converting Customary Units

Convert.

1. 3 yards = _____ inches
2. _____ yards = 87 feet
3. _____ cups = 104 fluid ounces
4. 4 quarts = _____ pints
5. 4 pounds = _____ ounces
6. 80 ounces = _____ pounds
7. 5 miles = _____ yards
8. _____ gallons = 48 cups
9. _____ cups = 4 pints
10. 36 inches = _____ yards

Compare. Write <, >, or =.

11. 4 quarts ☐ 24 cups
12. 2.5 feet ☐ 32 inches
13. 8 ounces ☐ $\frac{1}{4}$ pound
14. 5 cups ☐ 40 fluid ounces
15. 56 ounces ☐ 3.5 pounds
16. 2 yards ☐ 5 feet
17. 1.5 miles ☐ 2,500 yards
18. $3\frac{1}{2}$ tons ☐ 6,000 pounds

19. Cassandra drank $8\frac{1}{2}$ cups of water during the mountain hike. How many fluid ounces of water did she drink?

_____

20. Stan cut a wooden plank into 4 pieces. Each piece was 18 inches long. How long was the plank before Stan cut it?

_____

Name _____ Date _____ Class _____

LESSON 9-3

Reteach

Converting Customary Units

You can use the table below to convert customary units.

Length	Weight	Capacity
1 foot = 12 inches	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 pint = 2 cups
1 yard = 3 feet		1 quart = 2 pints
1 mile = 5,280 feet		1 quart = 4 cups
1 mile = 1,760 yards		1 gallon = 4 quarts
		1 gallon = 128 fluid ounces

To figure out how many pounds are in 32 ounces, set up a proportion where the first ratio uses 16 ounces is 1 pound, and the second ratio uses a variable for the value you are trying to find.

$$\frac{16 \text{ ounces}}{1 \text{ pound}} = \frac{32 \text{ ounces}}{x \text{ pounds}}$$

Then solve the proportion.

$$\frac{16 \text{ ounces}}{1 \text{ pound}} = \frac{32 \text{ ounces}}{x \text{ pounds}}$$

First, find the cross products.

$$16x = 32$$

Think: $32 \div 16 = x$

Then, use a related math sentence to solve the equation.

$$x = 2$$

So, there are 2 pounds in 32 ounces.

Use the table above to set up a proportion. Then find each of the values.

1. the number of pounds in 80 ounces

$\frac{1}{16} =$ _____

_____

2. the number of quarts in 6 gallons

$\frac{4}{1} =$ _____

_____

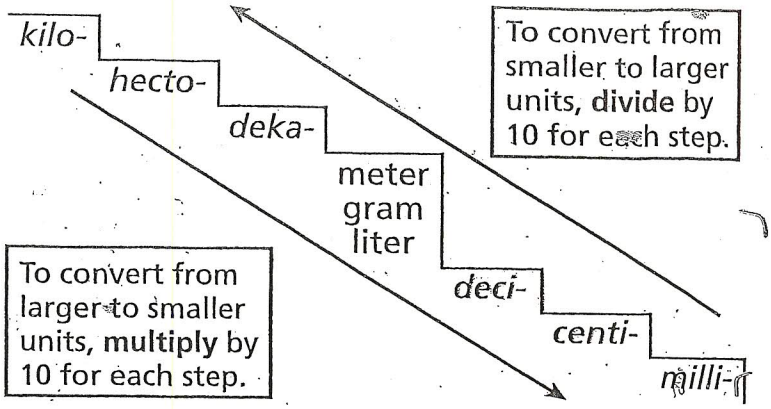
3. the number of yards in 5 miles

_____

4. the number of cups in 20 pints

_____

9-4 Converting Metric Units



Metric Measurements		
Distance	**Mass**	**Capacity**
1 km = 1,000 m	1 kg = 1,000 g	1 L = 1,000 mL
1 m = 100 cm	1 g = 1,000 mg	
1 cm = 10 mm		

9-3 Converting Customary Units

Common Customary Measurements		
Length	**Weight**	**Capacity**
1 foot = 12 inch	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 pint = 2 cups
1 yard = 3 feet		1 quart = 2 pints
1 mile = 5,280 feet		1 quart = 4 cups
1 mile = 1,760 yards		1 gallon = 4 quarts
		1 gallon = 16 cups
		1 gallon = 128 fluid ounces

9-1 Understanding Customary Units of Measure

Customary Units of Length		
Unit	**Abbreviation**	**Benchmark**
Inch	in.	Width of your thumb
Foot	ft	Distance from your elbow to your wrist
Yard	yd	Width of a classroom door
Mile	mi	Total length of 18 football fields

Customary Units of Capacity		
Unit	**Abbreviation**	**Benchmark**
Fluid Ounce	fl oz	A spoonful
Cup	c	A glass of juice
Pint	pt	A small bottle of salad dressing
Quart	qt	A small container of paint
Gallon	gal	A large container of milk

9-2 Understanding Metric Units of Measure

Metric Units of Length			
Unit	**Abbreviation**	**Relation to a Meter**	**Benchmark**
Millimeter	mm	0.001 m	Thickness of a dime
Centimeter	cm	0.01 m	Width of a fingernail
Decimeter	dm	0.1 m	Width of a CD case
Meter	m	1 m	Width of a single bed
Kilometer	km	1,000 m	Distance around a city block

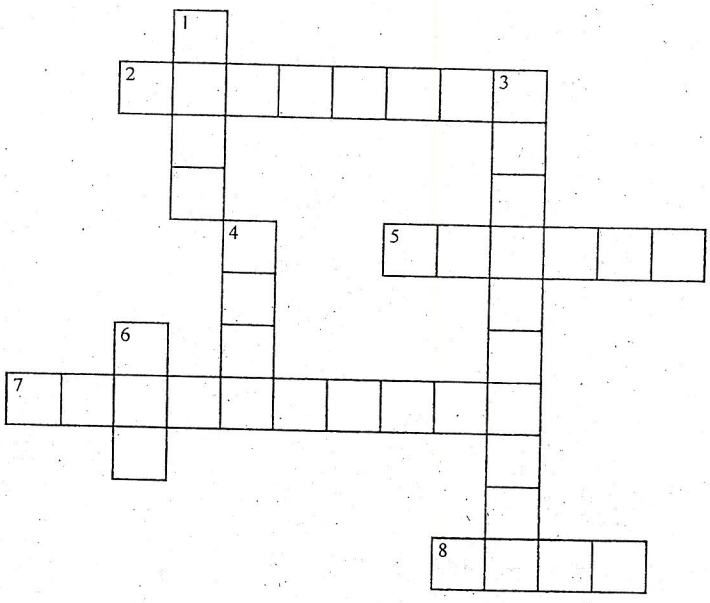
Metric Units of Capacity			
Unit	**Abbreviation**	**Relation to a Liter**	**Benchmark**
Milliliter	mL	0.001 L	Drop of water
Liter	L	1 L	Blender container

Name: _____ Number: _____

Date: _____

Vocabulary – Crossword

SOL 6.9 – Customary and Metric Measurement Weight/Mass and Volume/Capacity



ACROSS

2 A unit of mass in the metric system equal to 1,000 grams.

5 A customary unit used to measure capacity equal to 4 quarts.

7 A customary unit used to measure capacity - 16 of which equal 1 cup.

8 A metric unit used to measure mass equal to 1,000 milligrams.

DOWN

1 A unit of length in the customary system equal to 5,280 feet.

3 A unit of length in the metric system – 1,000 of which equal 1 meter.

4 A unit of length in the customary system equal to 3 feet or 36 inches.

6 A customary unit used to measure capacity equal to 16 fluid ounces.

Sixth Grade
Math Vocabulary
SOL 6.9 – Customary and Metric Measurement – Weight/Mass and Volume/Capacity

1. **Cup (c)**: A customary unit used to measure capacity equal to 8 fluid ounces.

2. **Fluid Ounce (fl oz)**: A customary unit used to measure capacity - 8 of which equal 1 cup.

3. **Gallon (gal)**: A customary unit used to measure capacity equal to 4 quarts.

4. **Gram (g)**: A metric unit used to measure mass equal to 1,000 milligrams.

5. **Kilogram (kg)**: A unit of mass in the metric system equal to 1,000 grams.

6. **Mile (mi)**: A unit of length in the customary system equal to 5,280 feet.

7. **Millimeter (mm)**: A unit of length in the metric system – 1,000 of which equal 1 meter.

8. **Yard (yd)**: A unit of length in the customary system equal to 3 feet or 36 inches.

Name: _____ Date: _____

Reasonable Measurement Activity

Choose the most reasonable measurement.

1. Thickness of a dime	a. 1 m	b. 1 cm	c. 1 mm
2. Glass of water	a. 250 kL	b. 250 mL	c. 250 L
3. Weight of a pencil	a. 10 mg	b. 10 g	c. 10 kg
4. Full tank of gas	a. 30 L	b. 30 kL	c. 30 mL

Complete the following.

5. 25 g = _____ kg

6. 89.7 L = _____ mL

7. 125 mm = _____ km

8. 2350 kg = _____ mg

9. 0.001 hm = _____ m

10. 0.975 g = _____ mg

11. 803 mL = _____ kL

12. 4 mg = _____ hg

13. 850 dm = _____ dam

14. 0.11 L = _____ daL

15. 2235 kg = _____ g

16. 10.5 mL = _____ L

Circle the correct answer.

17. Which is larger?	a. 25 mL	b. 25 hL	c. 25 dL	d. 25 daL
18. Which is longer?	a. 135 m	b. 135 hm	c. 135 dm	d. 135 mm
19. Which is heavier?	a. 0.1 mg	b. 0.1 g	c. 0.1 kg	d. 0.1 cg

Name _____ Date _____ Class _____

LESSON 9-4

Practice A

Converting Metric Units

Circle the letter of the correct answer.

1. If you want to multiply 7.95 • 100, what should you do?
   - **A** Move the decimal point in 7.95 two places to the left.
   - **B** Move the decimal point in 7.95 one place to the left.
   - **C** Move the decimal point in 7.95 two places to the right.
   - **D** Move the decimal point in 7.95 one place to the right.

2. If you want to divide 16.043 ÷ 10, what should you do?
   - **A** Move the decimal point in 16.043 two places to the left.
   - **B** Move the decimal point in 16.043 one place to the left.
   - **C** Move the decimal point in 16.043 two places to the right.
   - **D** Move the decimal point in 16.043 two places to the left.

Convert.

3. A paper clip is about 10 millimeters wide. 10 mm = _____ cm

4. A bottle of apple juice holds 1 liter. 1 L = _____ mL

5. A dog weighs about 20 kilograms. 20 kg = _____ g

6. Most bathtubs can hold about 190 liters of water. 190 L = _____ mL

7. An average house mouse weighs 12 grams. 12 g = _____ mg

8. A sheet of notebook paper is 27.5 cm long. 27.5 cm = _____ m

Compare. Write <, >, or =.

9. 200 millimeters ☐ 2 centimeters

10. 35,000 milliliters ☐ 35 liters

11. 5 kilograms ☐ 500 grams

12. 10.5 centimeters ☐ 1.05 millimeters

13. One ruler is 30 centimeters long. A different ruler is 200 millimeters long. Which ruler is longer?

_____

14. Fatima says that she weighs 45 grams, but she used the wrong unit of measurement. How much does Fatima really weigh?

_____

Name _____ Date _____ Class _____

LESSON 9-4

Practice B

Converting Metric Units

Convert.

1. A large thermos holds about 1.5 liters. 1.5 L = _____ mL

2. A computer screen is about 30.75 cm wide. 30.75 cm = _____ mm

3. A beetle weighs about 0.68 g. 0.68 g = _____ mg

4. The distance from Dallas to Denver is 1,260 km. 1,260 km = _____ m

5. 50 cm = _____ mm

6. 3.6 L = _____ mL

7. 6.5 kg = _____ g

8. 0.9 km = _____ m

9. 1.42 m = _____ cm

10. 12.85 mL = _____ L

Compare. Write <, >, or =.

11. 500 millimeters ☐ 50 centimeters

12. 6.2 liters ☐ 620 milliliters

13. 8.3 kilograms ☐ 8,300 grams

14. 2.6 meters ☐ 26,000 centimeters

15. An official hockey puck can weigh no more than 170 grams. What is the puck's maximum weight in kilograms?

_____

16. An official hockey puck is 2.54 centimeters thick. What is the official thickness of a hockey puck in millimeters?

_____

17. An official hockey goal is 46.45 meters tall. What is the height of a hockey goal in centimeters?

_____

18. Hockey pucks can be hit at speeds of up to 190 kilometers per hour! How many meters per hour is that?

_____

Name _____ Date _____ Class _____

LESSON 9-4

Reading Strategies

Understand Vocabulary

Knowing the meaning of the prefixes for metric units helps you understand the size of each unit.

The prefix *milli-* means **1 thousandth.**
The prefix *centi-* means **1 hundredth.**
The prefix *kilo-* means **1,000.**

When you convert from a larger unit to a smaller unit, you multiply by a power of 10.
When you convert from a smaller unit to a larger unit, you divide by a power of 10.

Length	To change from kilometers to meters, multiply by 1,000. To change from meters to kilometers, divide by 1,000.
	To change from meters to centimeters, multiply by 100. To change from centimeters to meters, divide by 100.
Mass	To change from kilograms to grams, multiply by 1,000. To change from grams to kilograms, divide by 1,000.
Capacity	To change from liters to milliliters, multiply by 1,000. To change from milliliters to liters, divide by 1,000.

Answer each question.

1. What does the prefix *milli-* mean? _____
2. What does the prefix *kilo-* mean? _____
3. What does the prefix *centi-* mean? _____
4. How do you convert meters to kilometers? _____
5. How do you convert liters to milliliters? _____
6. How do you convert centimeters to meters? _____
7. How do you convert milliliters to liters? _____
8. How do you convert meters to centimeters? _____

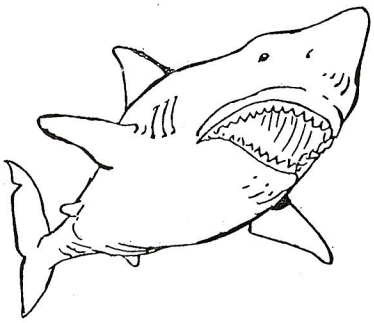
Name _____ Date _____ Class _____

LESSON 9-4

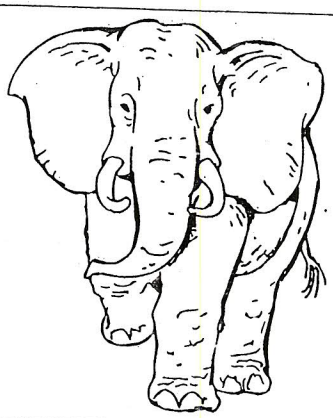
Challenge

Metric Animals

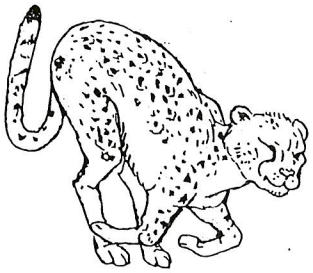
Write the most appropriate metric units for the measurements below.



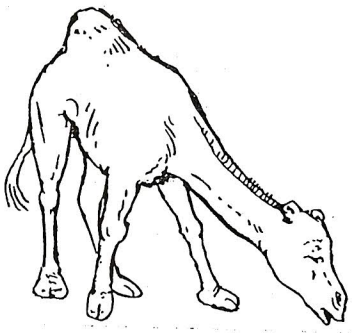
The teeth of a great white shark are about 12 ____, or 120 ____, long. That's probably longer than your hand!



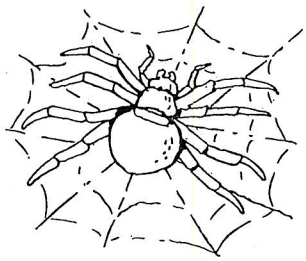
An elephant weighs about 5,000 ____, 5,000,000 ____, That's heavier than 5 cars piled on top of one another!



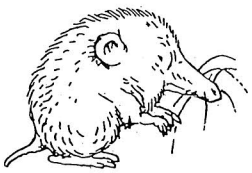
A cheetah can run about 110 ____, or 110,000 ____, per hour. That's faster than most cars driving on the highway!



A camel can drink about 225 ____, or 225,000 ____, of water in one hour. That's enough water to fill a bathtub!



The midget spider weaves the tiniest web. At only 10 ____, or 1 ____, long, its web is smaller than your thumbnail!



The pygmy shrew is the smallest animal on Earth. It only weighs about 1.5 ____, 0.0015 ____. That's less than a dime weighs!

Name _____ Date _____ Class _____

LESSON 9-3

Problem Solving

Converting Customary Units

Write the correct answer.

1. Each side of a professional baseball base must measure 15 inches. What is the base's side length in feet?

_____

2. In the NBA, any shot made from 22 feet or more from the basket is worth 3 points. How many yards from the basket is that?

_____

3. The maximum weight for a professional bowling ball is 16 pounds. What is the maximum weight in ounces?

_____

4. A professional hockey goal is 6 feet wide and 4 feet high. What is the area of the goal in square yards?

_____

5. An NFL football field is 120 yards long. How many times would you have to run across the field to run 1 mile?

_____

6. The official length for a marathon race is 26.2 miles. How many yards long is a marathon? How many feet?

_____

Circle the letter of the correct answer.

7. The distance between bases in a professional baseball game is 90 feet. What is the distance between bases in inches?

   A 1,000 inches **C** 1,100 inches

   B 1,080 inches **D** 10,800 inches

8. What is the area of a baseball diamond in square yards?

   F 300 square yards

   G 600 square yards

   H 900 square yards

   J 8,100 square yards

9. An NFL football can be no less than $\frac{87}{96}$ feet long. What is the minimum length for an official football in inches?

   A $10\frac{7}{8}$ inches **C** $\frac{87}{1152}$ inches

   B $1\frac{3}{32}$ inches **D** $2\frac{69}{96}$ inches

10. An official Olympic-sized swimming pool holds 880,000 gallons of water! How many fluid ounces of water is that?

    F 1,4080,000 fluid ounces

    G 7,040,000 fluid ounces

    H 112,640,000 fluid ounces

    J 1,760,000 fluid ounces

Name _____ Date _____ Class _____

LESSON 9-3

Puzzles, Twisters & Teasers

Conversion Pickup!

Solve each problem below. Begin at Start. Follow the directions after each problem to navigate through the maze and pick up letters. When you land on a letter, write it in the letter box at the bottom of the page.

To solve the riddle, unscramble the letters.

1. x tons = 10,000 pounds. Move x spaces right. _____
2. 7 pints = x and a half quarts. Move x spaces *down.* _____
3. 7,040 yards equals x miles. Move x spaces *left.* _____
4. Lupe is helping her father make punch. She has a 48-ounce bottle of ginger ale. How many pints of ginger ale do they have?

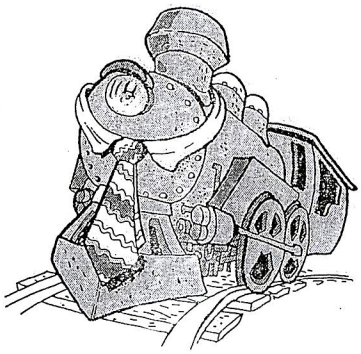
   x pints. Move x spaces *down.* _____
5. Prabir is making a suit, and needs $2\frac{2}{3}$ yards of material. He has $7\frac{1}{2}$ ft of material left over from a previous suit. Will that be enough? If yes, move two spaces left. If no, move two spaces *right.* _____
6. Six quarts equals x and a half gallons. Move x spaces *up.* _____

Start →

					L
N		E			
	G		K		
	I				A
V		M		P	
H			O		
	R		D		B

What kind of ties can't you wear?

R ___ ___ ___ ___ ___ A ___ TIES



Name _____ Date _____ Class _____

LESSON 9-3

Practice C

Converting Customary Units

Convert.

1. _____ feet = 3 yards

2. _____ cups = 52 fluid ounces

3. $1\frac{3}{4}$ miles = _____ yards

4. 2 gallons = _____ cups

5. _____ pounds = $2\frac{1}{5}$ tons

6. $1\frac{1}{2}$ yards = _____ inches

7. 40 ounces = _____ pounds

8. $1\frac{2}{3}$ miles = _____ feet

9. _____ cups = $5\frac{1}{4}$ quarts

10. 1,000 pounds = _____ ton

Compare. Write <, >, or =.

11. $4\frac{9}{10}$ pounds ☐ 80 ounces

12. 365 inches ☐ 10 yards

13. 3 miles ☐ 5,280 yards

14. 10 quarts ☐ 20 pints

15. $6\frac{2}{3}$ feet ☐ 80 inches

16. 4 gallons ☐ 30 pints

17. 11 gallons ☐ 40 quarts

18. $13\frac{2}{3}$ yards ☐ 40 feet

19. A Labrador retriever weighs 48 pounds. A huskie weighs 775 ounces. Which dog weighs more? by how many ounces?

_____

20. Maria drove 176,000 yards in 2 hours. How many miles per hour did she drive on average?

_____

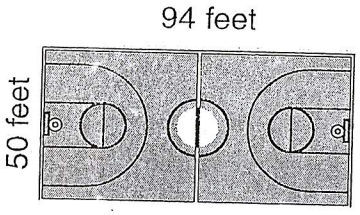
Name _____ Date _____ Class _____

LESSON 9-3

Challenge

Pro-portional Basketball

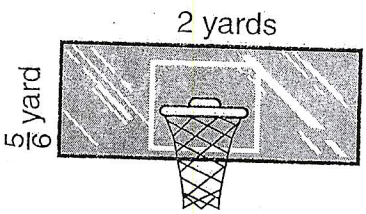
Convert each professional basketball measurement. Remember, there are 60 minutes in 1 hour.



Court

length: _____ yards

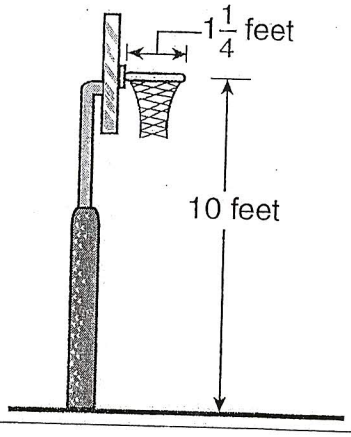
width: _____ yards



Backboard

length: _____ feet

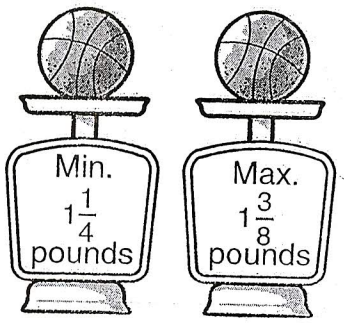
width: _____ feet



Basket

Height: _____ inches

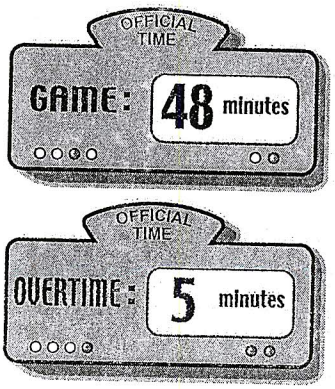
Diameter: _____ inches



Ball Weights

Minimum: _____ ounces

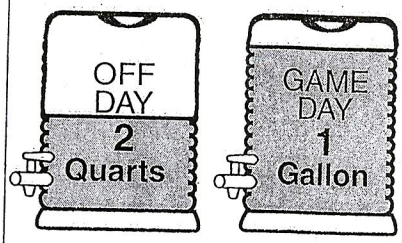
Maximum: _____ ounces



Official Times

Game: _____ hour

Overtime: _____ hour



Water Intake

Off Day _____ cups

Game Day _____ cups

9-1 Understanding Customary Units of Measure

Customary Units of Length		
Unit	**Abbreviation**	**Benchmark**
Inch	in.	Width of your thumb
Foot	ft	Distance from your elbow to your wrist
Yard	yd	Width of a classroom door
Mile	mi	Total length of 18 football fields

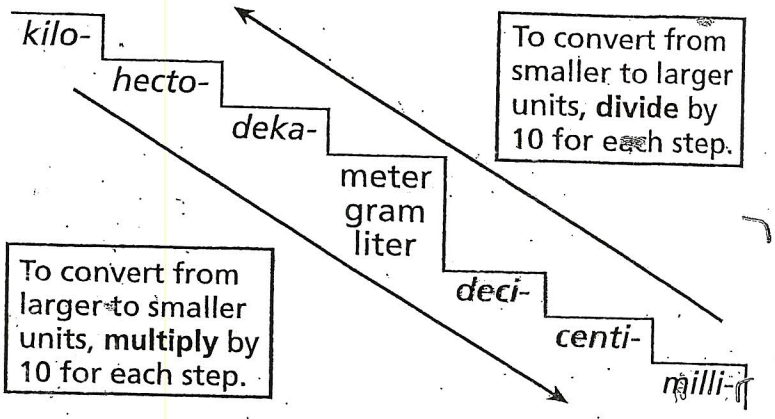
Customary Units of Capacity		
Unit	**Abbreviation**	**Benchmark**
Fluid Ounce	fl oz	A spoonful
Cup	c	A glass of juice
Pint	pt	A small bottle of salad dressing
Quart	qt	A small container of paint
Gallon	gal	A large container of milk

9-2 Understanding Metric Units of Measure

Metric Units of Length			
Unit	**Abbreviation**	**Relation to a Meter**	**Benchmark**
Millimeter	mm	0.001 m	Thickness of a dime
Centimeter	cm	0.01 m	Width of a fingernail
Decimeter	dm	0.1 m	Width of a CD case
Meter	m	1 m	Width of a single bed
Kilometer	km	1,000 m	Distance around a city block

Metric Units of Capacity			
Unit	**Abbreviation**	**Relation to a Liter**	**Benchmark**
Milliliter	mL	0.001 L	Drop of water
Liter	L	1 L	Blender container

9-4 Converting Metric Units



Metric Measurements		
Distance	**Mass**	**Capacity**
1 km = 1,000 m	1 kg = 1,000 g	1 L = 1,000 mL
1 m = 100 cm	1 g = 1,000 mg	
1 cm = 10 mm		

9-3 Converting Customary Units

Common Customary Measurements		
Length	**Weight**	**Capacity**
1 foot = 12 inch	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 pint = 2 cups
1 yard = 3 feet		1 quart = 2 pints
1 mile = 5,280 feet		1 quart = 4 cups
1 mile = 1,760 yards		1 gallon = 4 quarts
		1 gallon = 16 cups
		1 gallon = 128 fluid ounces

Name _____ Date _____ Class _____

LESSON 9-3

Reteach

Converting Customary Units

You can use the table below to convert customary units.

Length	Weight	Capacity
1 foot = 12 inches	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 pint = 2 cups
1 yard = 3 feet		1 quart = 2 pints
1 mile = 5,280 feet		1 quart = 4 cups
1 mile = 1,760 yards		1 gallon = 4 quarts
		1 gallon = 128 fluid ounces

To figure out how many pounds are in 32 ounces, set up a proportion where the first ratio uses 16 ounces is 1 pound, and the second ratio uses a variable for the value you are trying to find.

$$\frac{16 \text{ ounces}}{1 \text{ pound}} = \frac{32 \text{ ounces}}{x \text{ pounds}}$$

Then solve the proportion.

$$\frac{16 \text{ ounces}}{1 \text{ pound}} = \frac{32 \text{ ounces}}{x \text{ pounds}}$$

First, find the cross products.

$$16x = 32$$

Think: $32 \div 16 = x$

Then, use a related math sentence to solve the equation.

$$x = 2$$

So, there are 2 pounds in 32 ounces.

Use the table above to set up a proportion. Then find each of the values.

1. the number of pounds in 80 ounces

$\frac{1}{16} =$ _____

_____

2. the number of quarts in 6 gallons

$\frac{4}{1} =$ _____

_____

3. the number of yards in 5 miles

_____

4. the number of cups in 20 pints

_____

Name _____ Date _____ Class _____

LESSON 9-3

Reading Strategies

Reading a Table

Here is a table of customary units of measure.

Length	Weight	Capacity
1 foot = 12 inches	1 pound = 16 ounces	1 cup = 8 fluid ounces
1 yard = 3 feet	1 ton = 2,000 pounds	1 pint = 2 cups

To change from large units of measure to small units, multiply.

Feet is a larger unit of measure than inches.

To change 3 feet to inches:

You know that one foot = 12 inches.

Multiply three feet times 12 (inches).

3 feet = 36 inches

Change three pints into cups. Use the table to help you answer the following questions.

1. How many cups are there in a pint?

_____

2. How many pints do you need to change into cups?

_____

3. How will you find the answer?

_____

To change from small units of measure to larger units, divide.

Change 32 ounces into cups. Ounces are a smaller unit of measure than cups. Use the table to help you answer each question.

4. How many ounces in a cup? _____

5. How many ounces do you need to change into cups? _____

6. How will you find the answer? _____

Name _____ _____ _____Date Class

Reading Strategies

Understand Vocabulary

Knowing the meaning of the prefixes for metric units helps you understand the size of each unit.

The prefix *milli-* means **1 thousandth.**
The prefix *centi-* means **1 hundredth.**
The prefix *kilo-* means **1,000.**

When you convert from a larger unit to a smaller unit, you multiply by a power of 10,
When you convert from a smaller unit to a larger unit, you divide by a power of 10.

Length	To change from kilometers to meters, multiply by 1,000. To change from meters to kilometers, divide by 1,000. To change from meters to centimeters, multiply by 100. To change from centimeters to meters, divide by 100.
Mass	To change from kilograms to grams, multiply by 1,000. To change from grams to kilograms, divide by 1,000.
Capacity	To change from liters to milliliters, multiply by 1,000. To change from milliliters to liters, divide by 1,000.

Answer each question.

1. What does the prefix *milli-* mean? _____

2. What does the prefix *kilo-* mean? _____

3. What does the prefix *centi-* mean? _____

4. How do you convert meters to kilometers? _____

5. How do you convert liters to milliliters? _____

6. How do you convert centimeters to meters? _____

7. How do you convert milliliters to liiers? _____

8. How do you convert meters to centimeters? _____

Temperature

Conversion formulas:
C = (F - 32) X 5/9
F = (C X 9/5) + 32
32F = 0C
40F = 4.4C
100F = 37.7C
200F = 93.3C
225F = 107.2C
250F = 121.1C
275F = 135C
300F = 148.9C
325F = 162.8C
350F = 176.7C
375F = 190.6C
400F = 204.4C
425F = 218.3C
450F = 232.2C
475F = 246.1C
500F = 260C

Distance

1 inch = 2.5 centimeters
1 foot = 30 centimeters
1 millimeter = 0.04 inch
1 centimeter = 0.4 inch
1 meter = 3.3 feet

Abbreviations

Standard English
cup = C
fluid cup = fl C
fluid ounce = fl oz
fluid quart = fl qt
foot = ft
gallon = gal
inch = in
ounce = oz
pint = pt
pound = lb
quart = qt
tablespoon = T or Tbsp
teaspoon = t or tsp
yard = yd

Metric

millimeter = mm
centimeter = cm
meter = m
kilometer = km
milliliter = mL
liter = L
milligram = mg
gram = g
kilogram = kg

Unusual Weights and Measures

1 bit = 2 pinches
1 smidgen = 4 bits
1 dollop = 2 smidgens
1 gaggle = 3 dollops
1 gaggle = 2 glugs
1 blanket = 2 glugs
1 smothering = 3 blankets

DRY UNIT/LIQUID UNIT

1 pint, dry = 1.1636 pints, liquid
1 quart, dry = 1.1636 quarts, liquid
1 gallon, dry = 1.1636 gallons, liquid

Kilo	1,000
Hecto	100
Deka	10
Base	0
Deci	0.1
Centi	0.01
Milli	0.001

Weight

1 ounce = 28.35 grams
1 pound = 453.59 grams
1 gram = 0.035 ounce
100 grams = 3.5 ounces
1000 grams = 2.2 pounds
1 kilogram = 35 ounces
1 kilogram = 2.2 pounds

Volume

1 milliliter = 1/5 teaspoon
1 milliliter = 0.03 fluid ounce
1 teaspoon = 5 milliliters
1 tablespoon = 15 milliliters
1 fluid ounce = 30 milliliters
1 fluid cup = 236.6 milliliters
1 quart = 946.4 milliliters
1 liter (1000 milliliters) = 34 fluid ounces
1 liter (1000 milliliters) = 4.2 cups
1 liter (1000 milliliters) = 2.1 fluid pints
1 liter (1000 milliliters) = 1.06 fluid quarts
1 liter (1000 milliliters) = 0.26 gallon
1 gallon = 3.8 liters

Standard Measurements

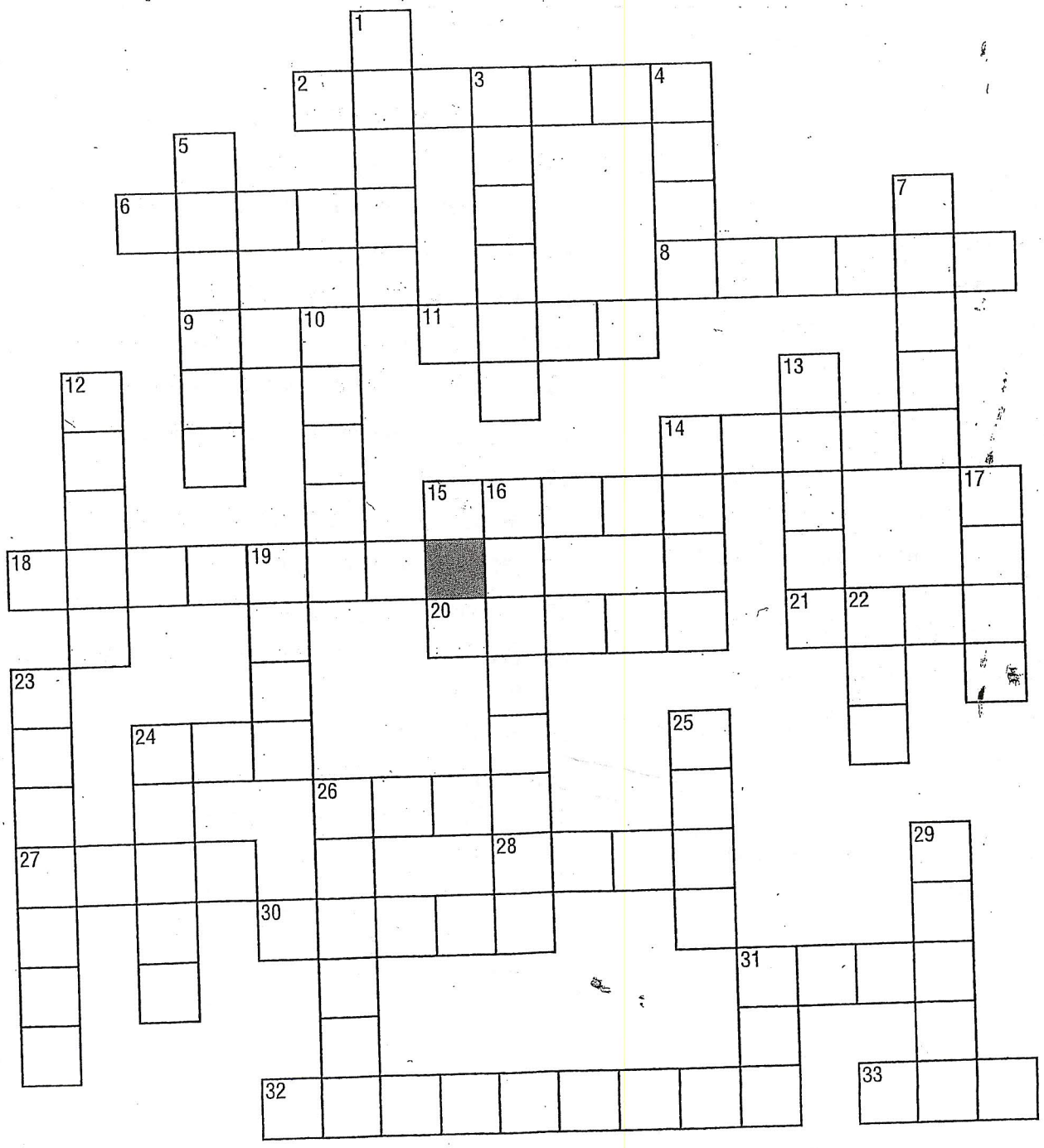
1 cup = 24 centiliter (cl) or 240 milliliter (ml)
1 tablespoon (tbsp) = 15 milliliter (ml)
1 teaspoon (tsp) = 5 milliliter (ml)
1 fluid ounce (oz) = 30 milliliter (ml)
1 pound (lb) = 454 grams (gm)

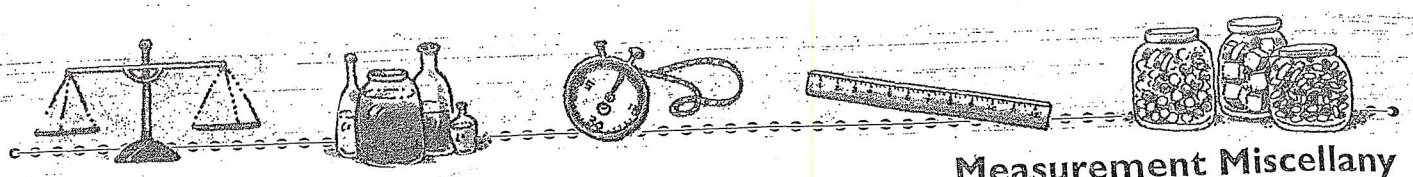
Name _____

Measures Crossword Puzzle Grid

The Directions

All the clues in this puzzle are about customary measure. Check your spelling!





Name _____

Measures Crossword Puzzle Clues

Across

2. A _____ clock tells time only with numbers.
6. 32 ounces = 1 _____
8. 4 quarts = 1 _____
9. 8 ounces = 1 _____
11. A yard has 3 _____.
14. To _____ myself, I stand on a scale.
15. A _____ tells how heavy something is.
18. 1 minute = 60 _____
20. A _____ shows what time it is.
21. 1 _____ = 60 minutes
24. The abbreviation for *minute* is _____.
26. Falling _____ in an hourglass shows time passing.
27. A basketball player may be 7 feet _____.
28. The space inside a shape is its _____.
30. Use a _____ to measure length.
31. One quart has _____ cups.
32. _____ tells how far around a shape.
33. _____ is the abbreviation for the shortest month of the year.

Down

1. 2 _____ = 1 quart
3. 12 _____ = 1 foot
4. *Length* is how _____ something is.
5. 8 _____ = 1 cup
7. January is the first _____ of the year.
10. 16 ounces = 1 _____
12. A week has _____ days.
13. _____ means how wide something is.
14. Monday is the first day of a school _____.
16. A _____ shows months and dates.
17. 36 inches = 1 _____
19. Another name for 12:00 P.M. is _____.
22. Fifty-two weeks make _____ year.
23. 100 years = 1 _____.
24. Use _____ to measure distances between towns.
25. 365 days = 1 _____
26. We measure area in _____ units.
29. One yard has _____ feet.
31. *Distance* means how _____.

Name _____ Class 1 2 3 5 6

S.O.L. 6.9 Class Practice Questions

1. Which of the following statements is false?

A A kilogram is a little more than 2 pounds.
B A foot is about 30 centimeters.
C Water freezes at 0° F and at 37°C.
D A kilometer is a little longer than _ of a mile.

2. Which is equivalent to 72 in.?

A $\frac{1}{2}$ yd.
B 2 yds.
C 4 yds.
D 6 yds.

3. Which of the following would make the statement true?
0.6 km = ___?___ m

A 0.06
B 6
C 60
D 600

4. Which of the following is equivalent to one kilometer?

A 0.001 meters
B 100 centimeters
C **1,000 grams**
D 1,000 meters

5. $6\frac{3}{4}$ feet is equivalent to which of the following?

A 39 inches
B 72 inches
C 76 inches
D 81 inches

6. A football field is fifty feet wide. Which of the following is equivalent to a football field?

A 15 meters
B 25 meters
C 30 meters
D 150 meters

7. **What unit would you use to estimate the height of a tall building?**

A mm
B cm
C m
D km

8. **What unit would be best in measuring the distance <u>on a map</u> from Washington, DC to New York City?**

A inches
B feet
C yards
D pounds

9. **What unit would you use to estimate the distance from Richmond to Virginia Beach?**

A mm
B cm
C m
D km

10. **Mr. Bowling is making a path of paving stones around his pool in the backyard. The path will be 18 feet long. Each of the square paving stones is 9 inches long. How many paving stones will Mr. Bowling need if he places them end to end?**

A 24
B 27
C 108
D 162

11. **How many meters are equal to 50 kilometers?**

A 5 m
B 50 m
C 5,000 m
D 50,000 m

12. **How many millimeters are equivalent to 400 centimeters?**

A 0.4 mm
B 4 mm
C 40 mm
D 4,000 mm

13. **Dwayne can throw a ball about 2,400 centimeters. How many millimeters can he throw the ball?**

A 24,000 mm
B 2,400 mm
C 240 mm
D 0.24 mm

14. **A rope is 8 feet long. Which of the following is another way to express the length of the rope?**

A $2\frac{1}{3}$ yards

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

C $2\frac{2}{3}$ yards

D $2\frac{3}{4}$ yards

15. **Danielle walked 6.8 kilometers in a recent marathon. How many meters did she walk in the marathon?**

A 68 meters
B 680 meters
C 6,800 meters
D 68,000 meters

16. **Jake's fence is 23 feet long. Which of the following is another way to express 23 feet?**

A $7\frac{1}{3}$ yards

B $7\frac{2}{3}$ yards

C 8 yards

D $8\frac{1}{3}$ yards

17. $8\frac{1}{2}$ feet is equivalent to which of the following?

A 14 inches
B 96 inches
C 102 inches
D 118 inches

18. How many yards are equivalent to 216 inches?

A 4
A 6
B 8
C 10

19. One kilometer is equivalent to which of the following?

A 0.001 meters
B 100 centimeters
C 1,000 grams
D 1,000 meters

20. Which of the following is equivalent to $7\frac{1}{4}$ feet?

A 18 inches
B 51 inches
C 87 inches
D 102 inches

Name _____ Class 1 2 3 5 6 Date_____

S.O.L. 6.9 Class Practice Question

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(6.9a)

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D 1,000 meters

20. **Which of the following is equivalent to $7\frac{1}{4}$ feet?**

A 18 inches
B 51 inches
C 87 inches
D 102 inches

(6.9b)

21. What value would make the following statement true?

$2\frac{1}{4}$ lb = ___?___ oz

A $22\frac{1}{2}$
B 36
C 54
D 81

22. What value would make the following statement true?

640 mg = ___?___ g

A 0.0064
B 0.064
C 0.64
D 6.4

23. 824 grams is equivalent to which of the following?

A 0.0824 kilograms
B 0.824 kilograms
C 8.24 kilograms
D 82.4 kilograms

24. Jack weighed a rock in science class. He said it was 25 grams. He needs to convert this answer to milligrams. What number would make the statement true?

25 g = _____ mg

A 0.25
B 2.5
C 2,500
D 25,000

25. 537 grams is equivalent to what other measurement?

A 0.0537 kilograms
B 0.537 kilograms
C about 2 pounds
D 0.244 kilograms

(6.9c)

26. Answer the question: 24 fl oz = ___?___ c

A $\frac{1}{2}$
B 3
C 4
D 6

27. Answer the question: 435 L = ___?___ kL

A 0.435
B 4.35
C 43.5
D 4350

28. Mrs. Chen brought 8 quarts of pink lemonade to the class party. How many gallons of pink lemonade did she bring?

A 1 gallon
B 2 gallons
C 3 gallons
D 4 gallons

29. Mr. Gomez needs 2 cups of fertilizer for his oak tree. Which of the following quantities is equivalent to 2 cups?

A 6 ounces
B 1 pint
C $\frac{1}{4}$ gallon
D $\frac{1}{2}$ quart

30. Marcos is helping his dad to put oil in his car. They put 4 quarts of oil. How many pints of oil are there in 4 quarts?

A 2 pints
B 8 pints
C 12 pints
D 16 pints

31. **Heather brings a container of juice to her friend's birthday party. The container holds 2 quarts of juice. How many cups of juice does the container hold?**

A 4 c
B 8 c
C 16 c
D 32 c

32. **David poured 250 milliliters of soda into a glass. What fractional part of a liter is 250 milliliters?**

A $\frac{1}{2}$ liter
B $\frac{1}{3}$ liter
C $\frac{1}{4}$ liter
D $\frac{1}{25}$ liter

33. **An aquarium holds 500 liters. How many kiloliters is 500 liters?**

A 0.005 kL
B 0.5 kL
C 50 kL
D 500,000 kL

34. **Which of the following values would make the statement below true?**

24 fl oz = ? c

A $\frac{1}{2}$
B 3
C 4
D 6

(6.9d)

35. **Your mom wants to replace the kitchen floor. Which unit of measure should she use to determine the area of the kitchen?**

A inches
B square feet
C feet
D millimeters