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|---|---|---|
| <b>Converting Units of Measure</b><br>Measurement   |   | <b>Student/Class Goal</b><br>Students will use measurement units to solve problems and convert between measurement systems. |
| <b>Outcome</b> <i>(lesson objective)</i><br>Given a unit of measurement, students will be able to convert it to other units of measurement and will be able to use it to solve contextual problems.   |   | <b>Time Frame</b><br>4 hours  |
| <b>Standard</b> <i>Use Math to Solve Problems and Communicate</i>   |   | <b>NRS EFL 6</b>  |
| <b>Components of Performance (COPs)</b><br>Understand, interpret, and work with pictures, numbers, and symbolic information.  | <b>Activity Addresses COPs</b> <i>(process)</i><br>Students will understand when to use each unit of measurement. |   |
| Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction, or carry out a task that has a mathematical dimension.  | Students will use problem solving skills to know what unit that their answer should be in.                        |   |
| Define and select data to be used in solving the problem.   | Students will the correct conversion factors to use when solving problems.  |   |
| Determine the degree of precision required by the situation.  | Students round their answers to the nearest hundredth when appropriate.   |   |
| Solve problem using appropriate quantitative procedures and verify that the results are reasonable.   | Students will label their answers with the appropriate unit and check over their work to verify their answer.     |   |
| Communicate results using a variety of mathematical representations, including graphs, charts, tables, and algebraic models.  | Students will make a table to list all of the conversion factors they might need.                                 |   |
| <b>Activity Addresses Benchmarks</b> <i>(content)</i><br>M.6.12, M.6.13, M.6.14, M.6.27, M.6.34, M.6.35   |   |   |
| <b>Materials</b><br>Measurement Unit Worksheets <a href="http://www.homeschoolmath.net/worksheets/measuring.php">http://www.homeschoolmath.net/worksheets/measuring.php</a><br>Measurement Worksheets   |   |   |
| <b>Learner Prior Knowledge</b> <ul style="list-style-type: none"> <li>• Adding, Subtracting, Multiplying, and Dividing Integers, Decimals, and Fractions</li> <li>• Using measurement systems</li> <li>• Problem Solving Skills</li> </ul>  |   |   |
| <b>Instructional Activities</b><br>Step 1<br>Review different units of measure and when to use each one. Ask students which unit of measure you would use to find...: <ul style="list-style-type: none"> <li>• Length of a pencil?</li> <li>• Distance from home plate to 2<sup>nd</sup> base?</li> <li>• Distance between two cities?</li> <li>• Time it takes to write your name?</li> <li>• Time it takes to write a paragraph?</li> <li>• Time it takes to take GED test?</li> <li>• Time it takes to complete a college class?</li> <li>• You do not have to ask these exact questions as long as you are making sure that students know what unit of measure is appropriate for different situations.</li> </ul><br>Step 2<br>Review how to round decimals to different places. Also discuss the difference between exact and |   |   |

approximate values. For example, a fraction is an exact value and a rounded decimal is an approximate value.

### Step 3

Teach students basic conversion factors.

- Teach students how to convert between inches, feet, yards, and miles (Customary units).
- Teach students how to convert between millimeters, centimeters, decimeters, meters, decameters, and kilometers (Metric units).
- Teach students how to convert between customary units and metric units.
- Teach students how to convert between seconds, minutes, hours, and days.
- Teach students how to convert between pounds, ounces, cups, pints, quarts, and gallons.

### Step 4

In a group, or with a partner, students will practice converting between different units of measure.

### Step 5

As a class, use units of measure to solve contextual problems. Label answers with the appropriate unit of measure.

### Step 6

Have students work individually on solving word problems that involve units of measure.

### **Assessment/Evidence** *(based on outcome)*

Informal assessment by monitoring group/partner discussion and work. Formally check students' individual work for process and accuracy. Assign additional practice if necessary.

### **Teacher Reflection/Lesson Evaluation**

Not yet completed.

### **Next Steps**

## Common Weights and Measures

### Length

#### Metric System

1 millimeter =  $1/1,000$  meter

1 centimeter =  $1/100$  meter

1 decimeter =  $1/10$  meter

1 meter (basic unit of length)

1 dekameter = 10 meters

1 kilometer = 1,000 meters

#### American and British Units

1 inch =  $1/36$  yard =  $1/12$  foot

1 foot =  $1/3$  yard

1 yard (basic unit of length)

1 mile = 1,760 yards = 5,280 feet

#### Conversion Factors

1 centimeter = 0.39 inch

1 inch = 2.54 centimeters

1 meter = 39.37 inches

1 foot = 0.305 meter

1 meter = 3.28 feet

1 yard = 0.914 meter

1 meter = 1.094 yards

1 kilometer = 0.62 mile

1 mile = 1.609 kilometers

### Volume and Capacity (Liquid and Dry)

#### Metric System

1 milliliter =  $1/1,000$  liter

1 centiliter =  $1/100$  liter

1 deciliter =  $1/10$  liter

1 dekaliter = 10 liters

1 hectoliter = 100 liters

| <b>Conversion Factors</b>        |
|----------------------------------|
| 1 milliliter = 0.034 fluid ounce |
| 1 fluid ounce = 29.6 milliliters |
| 1 U.S. quart = 0.946 liter       |
| 1 liter = 1.06 U.S. quarts       |
| 1 U.S. gallon = 3.8 liters       |

# Measuring Worksheet 3

Convert the measuring units as indicated.

1a. 60 in = \_\_\_\_\_ ft

1b. 132 in = \_\_\_\_\_ ft

2a. 36 ft = \_\_\_\_\_ yd

2b. 24 ft = \_\_\_\_\_ yd

3a. 4 ft = \_\_\_\_\_ in

3b. 27 ft = \_\_\_\_\_ yd

4a. 2 yd = \_\_\_\_\_ ft

4b. 30 ft = \_\_\_\_\_ yd

5a. 5 yd = \_\_\_\_\_ ft

5b. 8 ft = \_\_\_\_\_ in

6a. 144 in = \_\_\_\_\_ ft

6b. 72 in = \_\_\_\_\_ ft

7a. 7 ft = \_\_\_\_\_ in

7b. 10 ft = \_\_\_\_\_ in

8a. 108 in = \_\_\_\_\_ ft

8b. 33 ft = \_\_\_\_\_ yd

9a. 3 ft = \_\_\_\_\_ in

9b. 6 yd = \_\_\_\_\_ ft

10a. 3 ft = \_\_\_\_\_ yd

10b. 21 ft = \_\_\_\_\_ yd

## Answer Key for Measuring Worksheet 3

**1a. 5 ft**

**1b. 11 ft**

**2a. 12 yd**

**2b. 8 yd**

**3a. 48 in**

**3b. 9 yd**

**4a. 6 ft**

**4b. 10 yd**

**5a. 15 ft**

**5b. 96 in**

**6a. 12 ft**

**6b. 6 ft**

**7a. 84 in**

**7b. 120 in**

**8a. 9 ft**

**8b. 11 yd**

**9a. 36 in**

**9b. 18 ft**

**10a. 1 yd**

**10b. 7 yd**

# Measuring Worksheet 4

Convert the measuring units as indicated.

1a. 10560 ft = \_\_\_\_\_ mi

1b. 21120 ft = \_\_\_\_\_ mi

2a. 8800 yd = \_\_\_\_\_ mi

2b. 5 mi = \_\_\_\_\_ ft

3a. 2 mi = \_\_\_\_\_ yd

3b. 5280 yd = \_\_\_\_\_ mi

4a. 4 mi = \_\_\_\_\_ yd

4b. 1 mi = \_\_\_\_\_ ft

5a. 1 mi = \_\_\_\_\_ yd

5b. 15840 ft = \_\_\_\_\_ mi

6a. 4 mi = \_\_\_\_\_ ft

6b. 4 mi = \_\_\_\_\_ ft

7a. 4 mi = \_\_\_\_\_ yd

7b. 3 mi = \_\_\_\_\_ yd

8a. 5 mi = \_\_\_\_\_ ft

8b. 8800 yd = \_\_\_\_\_ mi

9a. 4 mi = \_\_\_\_\_ ft

9b. 15840 ft = \_\_\_\_\_ mi

10a. 5 mi = \_\_\_\_\_ yd

10b. 7040 yd = \_\_\_\_\_ mi

# Answer Key for Measuring Worksheet 4

**1a. 2 mi**

**1b. 4 mi**

**2a. 5 mi**

**2b. 26400 ft**

**3a. 3520 yd**

**3b. 3 mi**

**4a. 7040 yd**

**4b. 5280 ft**

**5a. 1760 yd**

**5b. 3 mi**

**6a. 21120 ft**

**6b. 21120 ft**

**7a. 7040 yd**

**7b. 5280 yd**

**8a. 26400 ft**

**8b. 5 mi**

**9a. 21120 ft**

**9b. 3 mi**

**10a. 8800 yd**

**10b. 4 mi**

# Measuring Worksheet 9

Convert the measuring units as indicated.

1a. 4.875 mi = \_\_\_\_\_ yd

1b. 5940 yd = \_\_\_\_\_ mi

2a. 6600 yd = \_\_\_\_\_ mi

2b. 6820 yd = \_\_\_\_\_ mi

3a. 7920 ft = \_\_\_\_\_ mi

3b. 0.5 mi = \_\_\_\_\_ yd

4a. 21120 ft = \_\_\_\_\_ mi

4b. 3300 yd = \_\_\_\_\_ mi

5a. 3.75 mi = \_\_\_\_\_ ft

5b. 220 yd = \_\_\_\_\_ mi

6a. 5940 ft = \_\_\_\_\_ mi

6b. 8.625 mi = \_\_\_\_\_ ft

7a. 3.875 mi = \_\_\_\_\_ ft

7b. 40920 ft = \_\_\_\_\_ mi

8a. 4.125 mi = \_\_\_\_\_ yd

8b. 2.875 mi = \_\_\_\_\_ yd

9a. 2.125 mi = \_\_\_\_\_ yd

9b. 4.625 mi = \_\_\_\_\_ yd

10a. 8800 yd = \_\_\_\_\_ mi

10b. 4.25 mi = \_\_\_\_\_ yd

## Answer Key for Measuring Worksheet 9

**1a. 8580 yd**

**1b. 3.375 mi**

**2a. 3.75 mi**

**2b. 3.875 mi**

**3a. 1.5 mi**

**3b. 880 yd**

**4a. 4 mi**

**4b. 1.875 mi**

**5a. 19800 ft**

**5b. 0.125 mi**

**6a. 1.125 mi**

**6b. 45540 ft**

**7a. 20460 ft**

**7b. 7.75 mi**

**8a. 7260 yd**

**8b. 5060 yd**

**9a. 3740 yd**

**9b. 8140 yd**

**10a. 5 mi**

**10b. 7480 yd**

# Measuring Worksheet 5

Convert the measuring units as indicated.

1a. 5 pt = \_\_\_\_\_ C

1b. 5 gal = \_\_\_\_\_ qt

2a. 6 gal = \_\_\_\_\_ qt

2b. 32 qt = \_\_\_\_\_ gal

3a. 8 oz = \_\_\_\_\_ C

3b. 16 C = \_\_\_\_\_ pt

4a. 6 C = \_\_\_\_\_ pt

4b. 6 C = \_\_\_\_\_ oz

5a. 8 qt = \_\_\_\_\_ gal

5b. 7 gal = \_\_\_\_\_ qt

6a. 12 qt = \_\_\_\_\_ gal

6b. 6 pt = \_\_\_\_\_ C

7a. 3 C = \_\_\_\_\_ oz

7b. 8 C = \_\_\_\_\_ oz

8a. 5 C = \_\_\_\_\_ oz

8b. 14 C = \_\_\_\_\_ pt

9a. 1 pt = \_\_\_\_\_ C

9b. 16 oz = \_\_\_\_\_ C

10a. 4 C = \_\_\_\_\_ pt

10b. 32 oz = \_\_\_\_\_ C

# Answer Key for Measuring Worksheet 5

**1a. 10 C**

**1b. 20 qt**

**2a. 24 qt**

**2b. 8 gal**

**3a. 1 C**

**3b. 8 pt**

**4a. 3 pt**

**4b. 48 oz**

**5a. 2 gal**

**5b. 28 qt**

**6a. 3 gal**

**6b. 12 C**

**7a. 24 oz**

**7b. 64 oz**

**8a. 40 oz**

**8b. 7 pt**

**9a. 2 C**

**9b. 2 C**

**10a. 2 pt**

**10b. 4 C**

# Measuring Worksheet 10

Convert the measuring units as indicated.

1a. 500 cm = \_\_\_\_\_ m

1b. 10 km = \_\_\_\_\_ m

2a. 800 cm = \_\_\_\_\_ m

2b. 3000 m = \_\_\_\_\_ km

3a. 9 cm = \_\_\_\_\_ mm

3b. 6 cm = \_\_\_\_\_ mm

4a. 8 km = \_\_\_\_\_ m

4b. 4000 m = \_\_\_\_\_ km

5a. 7000 m = \_\_\_\_\_ km

5b. 1000 cm = \_\_\_\_\_ m

6a. 80 mm = \_\_\_\_\_ cm

6b. 5000 m = \_\_\_\_\_ km

7a. 1 m = \_\_\_\_\_ cm

7b. 10 cm = \_\_\_\_\_ mm

8a. 2 cm = \_\_\_\_\_ mm

8b. 2000 m = \_\_\_\_\_ km

9a. 300 cm = \_\_\_\_\_ m

9b. 200 cm = \_\_\_\_\_ m

10a. 900 cm = \_\_\_\_\_ m

10b. 30 mm = \_\_\_\_\_ cm

# Answer Key for Measuring Worksheet 10

- |                   |                    |
|-------------------|--------------------|
| <b>1a.</b> 5 m    | <b>1b.</b> 10000 m |
| <b>2a.</b> 8 m    | <b>2b.</b> 3 km    |
| <b>3a.</b> 90 mm  | <b>3b.</b> 60 mm   |
| <b>4a.</b> 8000 m | <b>4b.</b> 4 km    |
| <b>5a.</b> 7 km   | <b>5b.</b> 10 m    |
| <b>6a.</b> 8 cm   | <b>6b.</b> 5 km    |
| <b>7a.</b> 100 cm | <b>7b.</b> 100 mm  |
| <b>8a.</b> 20 mm  | <b>8b.</b> 2 km    |
| <b>9a.</b> 3 m    | <b>9b.</b> 2 m     |
| <b>10a.</b> 9 m   | <b>10b.</b> 3 cm   |

# Measuring Worksheet 11

Convert the measuring units as indicated.

1a. 1877 m = \_\_\_\_\_ km

1b. 1333 m = \_\_\_\_\_ km

2a. 920 m = \_\_\_\_\_ km

2b. 139 m = \_\_\_\_\_ km

3a. 8236 m = \_\_\_\_\_ km

3b. 957 cm = \_\_\_\_\_ m

4a. 342 mm = \_\_\_\_\_ cm

4b. 400 cm = \_\_\_\_\_ m

5a. 827 cm = \_\_\_\_\_ m

5b. 9.91 m = \_\_\_\_\_ cm

6a. 8.509 km = \_\_\_\_\_ m

6b. 253 cm = \_\_\_\_\_ m

7a. 2.98 m = \_\_\_\_\_ cm

7b. 720 mm = \_\_\_\_\_ cm

8a. 8.036 km = \_\_\_\_\_ m

8b. 594 mm = \_\_\_\_\_ cm

9a. 0.245 km = \_\_\_\_\_ m

9b. 9.46 m = \_\_\_\_\_ cm

10a. 1.22 m = \_\_\_\_\_ cm

10b. 7.75 m = \_\_\_\_\_ cm

# Answer Key for Measuring Worksheet 11

**1a. 1.877 km**

**1b. 1.333 km**

**2a. 0.92 km**

**2b. 0.139 km**

**3a. 8.236 km**

**3b. 9.57 m**

**4a. 34.2 cm**

**4b. 4 m**

**5a. 8.27 m**

**5b. 991 cm**

**6a. 8509 m**

**6b. 2.53 m**

**7a. 298 cm**

**7b. 72 cm**

**8a. 8036 m**

**8b. 59.4 cm**

**9a. 245 m**

**9b. 946 cm**

**10a. 122 cm**

**10b. 775 cm**

# Measuring Worksheet 12

Convert the measuring units as indicated.

1a. 2000 g = \_\_\_\_\_ kg

1b. 9 L = \_\_\_\_\_ ml

2a. 1000 g = \_\_\_\_\_ kg

2b. 8000 g = \_\_\_\_\_ kg

3a. 10 L = \_\_\_\_\_ ml

3b. 6000 ml = \_\_\_\_\_ L

4a. 4 L = \_\_\_\_\_ ml

4b. 4 kg = \_\_\_\_\_ g

5a. 10 kg = \_\_\_\_\_ g

5b. 1 L = \_\_\_\_\_ ml

6a. 5000 ml = \_\_\_\_\_ L

6b. 6000 g = \_\_\_\_\_ kg

7a. 3 kg = \_\_\_\_\_ g

7b. 7 kg = \_\_\_\_\_ g

8a. 3000 ml = \_\_\_\_\_ L

8b. 9000 g = \_\_\_\_\_ kg

9a. 2000 ml = \_\_\_\_\_ L

9b. 5 kg = \_\_\_\_\_ g

10a. 7000 ml = \_\_\_\_\_ L

10b. 8000 ml = \_\_\_\_\_ L

# Answer Key for Measuring Worksheet 12

**1a. 2 kg**

**1b. 9000 ml**

**2a. 1 kg**

**2b. 8 kg**

**3a. 10000 ml**

**3b. 6 L**

**4a. 4000 ml**

**4b. 4000 g**

**5a. 10000 g**

**5b. 1000 ml**

**6a. 5 L**

**6b. 6 kg**

**7a. 3000 g**

**7b. 7000 g**

**8a. 3 L**

**8b. 9 kg**

**9a. 2 L**

**9b. 5000 g**

**10a. 7 L**

**10b. 8 L**

# Measuring Worksheet 13

Convert the measuring units as indicated.

1a. 0.225 kg = \_\_\_\_\_ g

1b. 5.879 kg = \_\_\_\_\_ g

2a. 8.201 kg = \_\_\_\_\_ g

2b. 9.059 L = \_\_\_\_\_ ml

3a. 8.798 kg = \_\_\_\_\_ g

3b. 5600 g = \_\_\_\_\_ kg

4a. 0.21 L = \_\_\_\_\_ ml

4b. 8.173 L = \_\_\_\_\_ ml

5a. 404 ml = \_\_\_\_\_ L

5b. 9.704 L = \_\_\_\_\_ ml

6a. 4649 ml = \_\_\_\_\_ L

6b. 118 g = \_\_\_\_\_ kg

7a. 4395 g = \_\_\_\_\_ kg

7b. 9748 ml = \_\_\_\_\_ L

8a. 8849 g = \_\_\_\_\_ kg

8b. 5913 g = \_\_\_\_\_ kg

9a. 1.104 kg = \_\_\_\_\_ g

9b. 6428 g = \_\_\_\_\_ kg

10a. 7540 g = \_\_\_\_\_ kg

10b. 9924 g = \_\_\_\_\_ kg

## Answer Key for Measuring Worksheet 13

**1a. 225 g**                      **1b. 5879 g**

**2a. 8201 g**                      **2b. 9059 ml**

**3a. 8798 g**                      **3b. 5.6 kg**

**4a. 210 ml**                      **4b. 8173 ml**

**5a. 0.404 L**                      **5b. 9704 ml**

**6a. 4.649 L**                      **6b. 0.118 kg**

**7a. 4.395 kg**                      **7b. 9.748 L**

**8a. 8.849 kg**                      **8b. 5.913 kg**

**9a. 1104 g**                      **9b. 6.428 kg**

**10a. 7.54 kg**                      **10b. 9.924 kg**

# Measuring Worksheet 15

Convert the measuring units as indicated.

1a. 2.25 gal = \_\_\_\_\_ qt

1b. 52140 ft = \_\_\_\_\_ mi

1c. 1.336 gal = \_\_\_\_\_ oz

2a. 4.453 km = \_\_\_\_\_ m

2b. 24 oz = \_\_\_\_\_ qt

2c. 5 C = \_\_\_\_\_ oz

3a. 103 in = \_\_\_\_\_ ft

3b. 3 pt = \_\_\_\_\_ qt

3c. 72 oz = \_\_\_\_\_ qt

4a. 42 oz = \_\_\_\_\_ gal

4b. 3.5 qt = \_\_\_\_\_ C

4c. 5.8 T = \_\_\_\_\_ lb

5a. 1.3 T = \_\_\_\_\_ lb

5b. 5.875 C = \_\_\_\_\_ oz

5c. 2.25 lb = \_\_\_\_\_ oz

6a. 5078 m = \_\_\_\_\_ km

6b. 10300 lb = \_\_\_\_\_ T

6c. 0.875 qt = \_\_\_\_\_ oz

7a. 12 C = \_\_\_\_\_ qt

7b. 57 ft = \_\_\_\_\_ yd

7c. 7 pt = \_\_\_\_\_ qt

8a. 36300 ft = \_\_\_\_\_ mi

8b. 33 ft = \_\_\_\_\_ yd

8c. 8691 m = \_\_\_\_\_ km

9a. 3 gal = \_\_\_\_\_ qt

9b. 4.75 gal = \_\_\_\_\_ qt

9c. 3.625 C = \_\_\_\_\_ oz

10a. 750 cm = \_\_\_\_\_ m

10b. 312 oz = \_\_\_\_\_ gal

10c. 1.073 L = \_\_\_\_\_ ml

11a. 21.667 yd = \_\_\_\_\_ ft

11b. 2.125 mi = \_\_\_\_\_ yd

11c. 4180 yd = \_\_\_\_\_ mi

12a. 9.304 L = \_\_\_\_\_

12b. 6.625 C = \_\_\_\_\_ oz

12c. 14 in = \_\_\_\_\_ ft

ml

13a. 4 C = \_\_\_\_\_ pt

13b. 0.25 mi = \_\_\_\_\_  
yd

13c. 36 oz = \_\_\_\_\_ qt

14a. 49 oz = \_\_\_\_\_ C

14b. 12 C = \_\_\_\_\_ pt

14c. 53 in = \_\_\_\_\_ ft

15a. 2 C = \_\_\_\_\_ oz

15b. 5.375 mi = \_\_\_\_\_  
ft

15c. 8.17 km = \_\_\_\_\_  
m

16a. 4.5 T = \_\_\_\_\_ lb

16b. 4 pt = \_\_\_\_\_ qt

16c. 2.5 qt = \_\_\_\_\_  
pt

17a. 15 yd = \_\_\_\_\_ ft

17b. 48 oz = \_\_\_\_\_ C

17c. 6.22 m = \_\_\_\_\_  
cm

18a. 4.625 lb = \_\_\_\_\_  
oz

18b. 6.35 km = \_\_\_\_\_  
m

18c. 2.5 gal = \_\_\_\_\_  
qt

19a. 0.76 m = \_\_\_\_\_  
cm

19b. 201 oz = \_\_\_\_\_ gal

19c. 11000 lb = \_\_\_\_\_  
T

20a. 7.125 C = \_\_\_\_\_ oz

20b. 53.2 cm = \_\_\_\_\_  
mm

20c. 3.099 L = \_\_\_\_\_  
ml

## Answer Key for Measuring Worksheet 15

- |                      |                       |                      |
|----------------------|-----------------------|----------------------|
| <b>1a.</b> 9 qt      | <b>1b.</b> 9.875 mi   | <b>1c.</b> 171 oz    |
| <b>2a.</b> 4453 m    | <b>2b.</b> 0.75 qt    | <b>2c.</b> 40 oz     |
| <b>3a.</b> 8.583 ft  | <b>3b.</b> 1.5 qt     | <b>3c.</b> 2.25 qt   |
| <b>4a.</b> 0.328 gal | <b>4b.</b> 14 C       | <b>4c.</b> 11600 lb  |
| <b>5a.</b> 2600 lb   | <b>5b.</b> 47 oz      | <b>5c.</b> 36 oz     |
| <b>6a.</b> 5.078 km  | <b>6b.</b> 5.15 T     | <b>6c.</b> 28 oz     |
| <b>7a.</b> 3 qt      | <b>7b.</b> 19 yd      | <b>7c.</b> 3.5 qt    |
| <b>8a.</b> 6.875 mi  | <b>8b.</b> 11 yd      | <b>8c.</b> 8.691 km  |
| <b>9a.</b> 12 qt     | <b>9b.</b> 19 qt      | <b>9c.</b> 29 oz     |
| <b>10a.</b> 7.5 m    | <b>10b.</b> 2.438 gal | <b>10c.</b> 1073 ml  |
| <b>11a.</b> 65 ft    | <b>11b.</b> 3740 yd   | <b>11c.</b> 2.375 mi |
| <b>12a.</b> 9304 ml  | <b>12b.</b> 53 oz     | <b>12c.</b> 1.167 ft |
| <b>13a.</b> 2 pt     | <b>13b.</b> 440 yd    | <b>13c.</b> 1.125 qt |
| <b>14a.</b> 6.125 C  | <b>14b.</b> 6 pt      | <b>14c.</b> 4.417 ft |
| <b>15a.</b> 16 oz    | <b>15b.</b> 28380 ft  | <b>15c.</b> 8170 m   |
| <b>16a.</b> 9000 lb  | <b>16b.</b> 2 qt      | <b>16c.</b> 5 pt     |
| <b>17a.</b> 45 ft    | <b>17b.</b> 6 C       | <b>17c.</b> 622 cm   |
| <b>18a.</b> 74 oz    | <b>18b.</b> 6350 m    | <b>18c.</b> 10 qt    |
| <b>19a.</b> 76 cm    | <b>19b.</b> 1.57 gal  | <b>19c.</b> 5.5 T    |
| <b>20a.</b> 57 oz    | <b>20b.</b> 532 mm    | <b>20c.</b> 3099 ml  |