

6th Grade

2.6 Use Ratios to Convert Measurement

Common Measurements:

1 foot (ft) = 12 inches (in)

1 yard (yd) = 3 ft

1 mile (mi) = 5,280 ft

1 mi = 1,760 yd

1 cup (c) = 8 ounces (oz)

1 pint (pt) = 2 c

1 quart (qt) = 2 pt

1 gallon (gal) = 4 qt

1 pound (lb) = 16 oz

1 ton (T) = 2,000 lbs

1 qt = 2 pt

1 gal = 4 qt

1) 3 ft = 36 in.

$$\frac{3 \text{ ft}}{1} \cdot \frac{12 \text{ in}}{1 \text{ ft}} = \frac{3 \cdot 12 \text{ ft in}}{1 \text{ ft}} = 36 \text{ in}$$

2) 3 qt = 6 pt

1 qt = 2 pts

$$\frac{3 \text{ qt}}{1} \cdot \frac{2 \text{ pts}}{1 \text{ qt}} = 6 \text{ pts}$$

$$3) 3 \text{ yd} = \underline{9} \text{ ft}$$

$$1 \text{ yd} = 3 \text{ ft}$$

$$\frac{3 \cancel{\text{yd}}}{1} \cdot \frac{3 \text{ ft}}{1 \cancel{\text{yd}}} = 9 \text{ ft}$$

$$4) 2 \text{ mi} = \underline{3520} \text{ yd}$$

$$1 \text{ mi} = 1760 \text{ yds}$$

$$\frac{2 \cancel{\text{mi}}}{1} \cdot \frac{1760 \text{ yds}}{1 \cancel{\text{mi}}} = \frac{\overset{11}{1760}}{2}$$
$$= 3520$$

$$5) 20 \text{ ft} = \underline{6\frac{2}{3}} \text{ yd}$$

$$3 \text{ ft} = 1 \text{ yds} \quad 6.\bar{6}$$

$$\frac{20\cancel{\text{ft}}}{1} \cdot \frac{1\cancel{\text{yd}}}{3\cancel{\text{ft}}} = \frac{20}{3} \quad \begin{array}{r} 6\frac{2}{3} \\ 3 \overline{)20} \\ \underline{18} \\ 2 \end{array}$$

$$6) 64 \text{ oz} = \underline{4} \text{ pt}$$

$$8 \text{ oz} = 1 \text{ c}$$

$$2 \text{ c} = 1 \text{ pt}$$

$$\frac{64\cancel{\text{oz}}}{1} \cdot \frac{1\cancel{\text{c}}}{8\cancel{\text{oz}}} \cdot \frac{1\cancel{\text{pt}}}{2\cancel{\text{c}}} = \frac{64}{16} \text{ pts} = 4$$

7) 350,000 lb = 175 T

1 T = 2000 lbs

$$\frac{350,000 \text{ lbs}}{1} \cdot \frac{1 \text{ T}}{2000 \text{ lbs}} = \frac{350,000}{2000}$$

$$2 \overline{) 350} \begin{array}{r} 175 \\ \underline{200} \\ 500 \\ \underline{400} \\ 1000 \\ \underline{800} \\ 2000 \\ \underline{2000} \\ 0 \end{array}$$

8) 16 pt = 2 gal

2 pts = 1 qt

4 qts = 1 gal

$$\frac{16 \cancel{\text{pt}}}{1} \cdot \frac{1 \cancel{\text{qt}}}{2 \text{ pts}} \cdot \frac{1 \text{ gal}}{4 \cancel{\text{qt}}} = \frac{16}{8} = 2$$

$$9) 2,640 \text{ yd} = \underline{1\frac{1}{2}} \text{ mi}$$

$$\frac{2640 \cancel{\text{yd}}}{1} \cdot \frac{1 \text{ mi}}{1760 \cancel{\text{yd}}} =$$

$$2 \overline{) 3 \frac{1}{2}} \\ \underline{2} \\ 1$$

$$1760 \text{ yd} = 1 \text{ mi}$$

$$\frac{2640 \div 20}{1760} = \frac{132 \div 2}{88 \div 2}$$

$$\frac{66 \div 11}{44 \div 11} = \frac{6}{4} = \frac{3}{2}$$

10) A bookcase is 59 inches tall. The distance between the top of the bookcase and the ceiling is about 4 feet. Which is closest to the distance between the floor and the ceiling?

- A) 4 ft B) 5 ft C) 8 ft D) 9 ft $1 \text{ ft} = 12 \text{ in}$

$$59 \text{ in} = \underline{\quad} \text{ ft}$$

$$\frac{59 \cancel{\text{in}}}{1} \cdot \frac{1 \text{ ft}}{12 \cancel{\text{in}}} = \frac{59}{12} \approx 4.9 \approx 5 \text{ ft}$$

$$\frac{60}{12} = 5$$



11) Justin's dog eats 20 ounces of dry dog food each day. If Justin buys a 40-pound bag of dog food, how many days will it last?

$$20 \text{ oz} = \frac{1 \frac{1}{4} \text{ lbs}}{1.25}$$

$$\frac{20 \cancel{\text{oz}}}{1} \cdot \frac{1 \text{ lb}}{16 \cancel{\text{oz}}} = \frac{20}{16} \text{ lbs}$$

$$16 \overline{) 20} \begin{array}{r} 1 \\ \underline{16} \\ 4 \end{array}$$

$$16 \text{ oz} = 1 \text{ lb}$$

$$40 \text{ lbs} = \frac{640 \text{ oz}}{16 \text{ oz}}$$

$$\frac{40 \cancel{\text{lbs}}}{1} \cdot \frac{16 \cancel{\text{oz}}}{1 \text{ lb}} = 40 \cdot 16$$

$$20 \overline{) 640} \begin{array}{r} 32 \\ \underline{600} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$\frac{40}{16} \begin{array}{r} 240 \\ \underline{400} \\ 640 \end{array}$$

32 days

You Try:

a) 4 yd = 12 ft

$$3 \text{ ft} = 1 \text{ yd} \quad \frac{4 \text{ yd}}{1} \cdot \frac{3 \text{ ft}}{1 \text{ yd}}$$

b) 72 in = 2 yd 36 in = 1 yd

$$\frac{72 \cancel{\text{in}}}{1} \cdot \frac{1 \text{ yd}}{36 \cancel{\text{in}}} = \frac{72}{36}$$

c) 3 gal = 12 qt 4 qt = 1 gal

$$\frac{3 \text{ gal}}{1} \cdot \frac{4 \text{ qt}}{1 \text{ gal}}$$

d) 32 oz = 4 c 1 c = 8 oz

$$\frac{32 \cancel{\text{oz}}}{1} \cdot \frac{1 \text{ c}}{8 \cancel{\text{oz}}} = \frac{32}{8}$$

e) Brianna's brother is about 25 inches shorter than she is. If Brianna is 5 feet tall, which is closest to her brother's height in feet?

- A) 2 ft **B) 3 ft** C) 4 ft D) 5 ft

$$12 \text{ in} = 1 \text{ ft}$$

Homework

2.6 Worksheet

6th Grade

2.6 Use Ratios to Convert Measurements

Name: _____ Date: _____ Hour: ____

1) 5 ft = ____ in

2) 6 yd = ____ ft

3) 6 ft = ____ in

4) 3 mi = ____ ft

5) 48 in = ____ ft

6) 10 ft = ____ yd

7) 6,160 yd = ____ mi

8) 510 in = ____ ft

9) The largest telescope in the world is powerful enough to identify a penny that is 5 miles away. How many yards is this?

10) Kingda Ka at Six Flags in Jackson, New Jersey has a height of 456 ft. What is this height in yards?

2.6 Use Ratios to Convert Measurements 4th hr.notebook

December 07, 2015

11) 7 pt = ___ c

12) 24 qt = ___ gal

13) 16 pt = ___ gal

14) 5 c = ___ oz

15) 1,500 lb = ___ T

16) 8 c = ___ pt

17) 9 gal = ___ pt

18) 24 oz = ___ c

19) The heaviest land mammal, the African elephant, can weight more than 7 tons. How many pounds is this?

20) In the U.S., the annual consumption of ice cream is 24 pints per person. How many gallons of ice creas is this per person?