ALGEBRA 1
2-6 PRACTICE WORKSHEET

Name_____KEY_____

Date_____

Convert the given amount to the given unit.

1. 12 *inches to cm*; (1 *inch* = 2.54 *cm*)

$$12 \text{ in} \left(\frac{2.54 \text{ cm}}{1 \text{ in}} \right) = 30.48$$

2. 9 *hours to minutes*

$$9 \text{ hrs} \left(\frac{60 \text{ min}}{1 \text{ hr}} \right) = 540 \text{ min}$$

3. 10 *m to feet*; (1 *m* = 3.28 *feet*)

$$10 \text{ m} \left(\frac{3.28 \text{ ft}}{1 \text{ m}} \right) = 32.8 \text{ ft}$$

4. 45 *feet to yards*

$$45 \text{ ft} \left(\frac{1 \text{ yd}}{3 \text{ ft}} \right) = 15 \text{ yds}$$

5. A plumber needs to replace 20 feet of copper piping. When he gets to the supply store, the lengths of all of the products are measured in meters.

a. How many meters are in 1 foot? 1 foot = _____0.3048_____ m

b. How many meters of piping does he need to purchase?

$$20 \text{ ft} \left(\frac{0.3048 \text{ m}}{1 \text{ ft}} \right) = 6.096 \text{ m}$$

He needs to purchase 6 meters of copper piping.

6. An athletic director is laying out a rectangular soccer field to be 60 m wide and 95 m long.

a. How many yards are in 1 meter? 1 meter = _____1.09_____ yard

b. What are the dimensions of the field to the nearest whole yard?

width $60 \text{ m} \left(\frac{1.09 \text{ yd}}{1 \text{ m}} \right) = 65.4 \text{ yds} \approx 65 \text{ yds}$

length $95 \text{ m} \left(\frac{1.09 \text{ yd}}{1 \text{ m}} \right) = 103.6 \text{ yds} \approx 104 \text{ yds}$

The dimensions of the field are 65 yds × 104 yds.

Complete each conversion.

7. 1 gallon = __4__ quarts ; 1 minute = __60__ seconds

$$9 \frac{gal}{sec} = \underline{2160} \frac{qts}{min}$$

$$9 \frac{gal}{sec} \left(\frac{4 \ qts}{1 \ gal} \right) \left(\frac{60 \ sec}{1 \ min} \right) = 2160 \frac{qts}{min}$$

8. 1 mile = __1609__ m ; 1 hour = __60__ minutes; 1 minute = __60__ seconds

$$10 \frac{mi}{hour} = \underline{4.5} \frac{m}{sec}$$

$$10 \frac{mi}{hour} \left(\frac{1609 \ m}{1 \ mi} \right) \left(\frac{1 \ hour}{60 \ min} \right) \left(\frac{1 \ min}{60 \ sec} \right) \approx 4.5 \frac{m}{sec}$$

Determine each unit rate.

9. Jimmy earn $102 in 8 hours.

$$\frac{\$102}{8 \ hrs} = \$12.75/hr$$

10. The tub filled with 12 gallons of water in 5 minutes

$$\frac{12 \ gal}{5 \ min} = 2.4 \frac{gal}{min}$$

11. Which is a better buy, 3 pounds of apples for $8.31 or 5 pounds for $12.95. Explain.

$$\frac{\$8.31}{3 \ lbs} = \$2.77/lb$$

$$\frac{\$12.95}{5 \ lbs} = \$2.59/lb$$

Based on each unit rate, it is a better buy to purchase 5 lbs for $12.95.