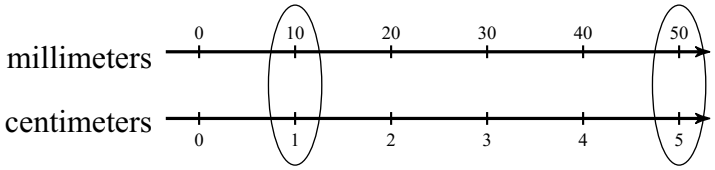
 Name_____

Converting Units

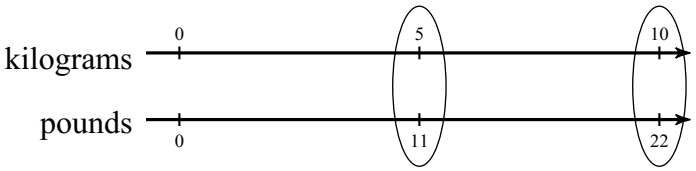
Date_____ Period____

Solve each problem. A double number line representing the units as equivalent ratios is provided.

1) A picture frame is 50 millimeters tall. We know that 10 millimeters is equivalent to 1 centimeter. What is the height of the picture frame in centimeters?



2) The mass of a bowling ball is 5 kilograms. We know that 10 kilograms is approximately 22 pounds. What is the mass of the bowling ball in pounds?



For each problem, sketch a double number line to represent the units as equivalent ratios and then solve the problem.

3) A bathtub is filled with 140 quarts of water. We know that 20 quarts is approximately 19 liters. What is the volume of water in liters?

4) A pool is 50 inches deep. We know that 100 inches is equivalent to 254 centimeters. What is the depth of the pool in centimeters?

Use dimensional analysis to solve each problem. Most of the work is provided.

5) A bathtub can hold 114 liters of water. We know that 38 liters is approximately 10 gallons. What is the capacity of the bathtub in gallons?

$$114 \text{ liters} \times \frac{10 \text{ gallons}}{38 \text{ liters}} \approx \square \text{ gallons}$$

6) A trail is 225 meters long. We know that 25 meters is approximately 82 feet. What is the length of the trail in feet?

$$225 \text{ meters} \times \frac{82 \text{ feet}}{25 \text{ meters}} \approx \square \text{ feet}$$

Use dimensional analysis to solve each problem.

7) The mass of a microwave oven is 20 kilograms. We know that 10 kilograms is approximately 22 pounds. What is the mass of the microwave oven in pounds?

8) A hot tub can hold 180 quarts of water. We know that 20 quarts is approximately 19 liters. What is the capacity of the hot tub in liters?

9) 2 tablespoons = 1 fluid ounce
18 tablespoons = _____ fluid ounces

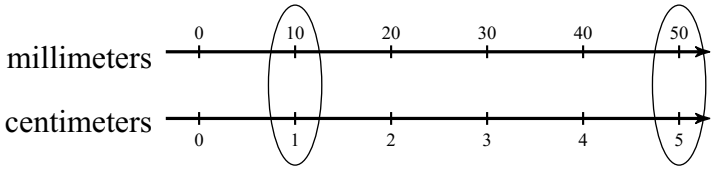
Kuta Software - Infinite Grade 6 Math Name_____

Converting Units

Date_____ Period____

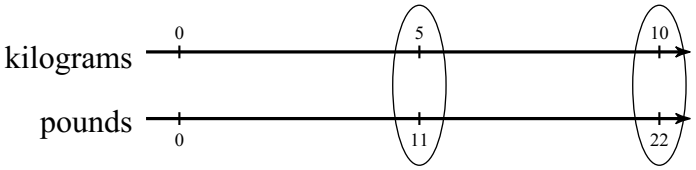
Solve each problem. A double number line representing the units as equivalent ratios is provided.

1) A picture frame is 50 millimeters tall. We know that 10 millimeters is equivalent to 1 centimeter. What is the height of the picture frame in centimeters?



5 centimeters

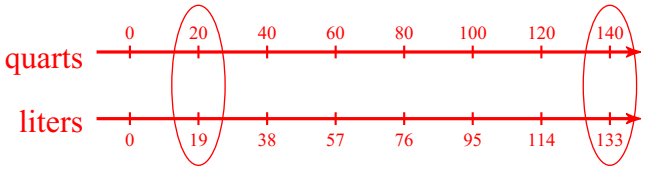
2) The mass of a bowling ball is 5 kilograms. We know that 10 kilograms is approximately 22 pounds. What is the mass of the bowling ball in pounds?



11 pounds

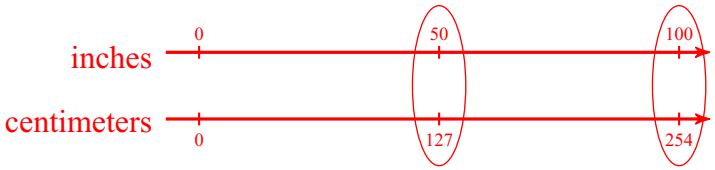
For each problem, sketch a double number line to represent the units as equivalent ratios and then solve the problem.

3) A bathtub is filled with 140 quarts of water. We know that 20 quarts is approximately 19 liters. What is the volume of water in liters?



133 liters

4) A pool is 50 inches deep. We know that 100 inches is equivalent to 254 centimeters. What is the depth of the pool in centimeters?



127 centimeters

Use dimensional analysis to solve each problem. Most of the work is provided.

5) A bathtub can hold 114 liters of water. We know that 38 liters is approximately 10 gallons. What is the capacity of the bathtub in gallons?

$$114 \text{ liters} \times \frac{10 \text{ gallons}}{38 \text{ liters}} \approx \boxed{30} \text{ gallons}$$

30 gallons

6) A trail is 225 meters long. We know that 25 meters is approximately 82 feet. What is the length of the trail in feet?

$$225 \text{ meters} \times \frac{82 \text{ feet}}{25 \text{ meters}} \approx \boxed{738} \text{ feet}$$

738 feet

Use dimensional analysis to solve each problem.

7) The mass of a microwave oven is 20 kilograms. We know that 10 kilograms is approximately 22 pounds. What is the mass of the microwave oven in pounds?

$$20 \text{ kilograms} \times \frac{22 \text{ pounds}}{10 \text{ kilograms}} \approx 44 \text{ pounds}$$

44 pounds

8) A hot tub can hold 180 quarts of water. We know that 20 quarts is approximately 19 liters. What is the capacity of the hot tub in liters?

$$180 \text{ quarts} \times \frac{19 \text{ liters}}{20 \text{ quarts}} \approx 171 \text{ liters}$$

171 liters

9) 2 tablespoons = 1 fluid ounce
18 tablespoons = _____ fluid ounces

$$18 \text{ tablespoons} \times \frac{1 \text{ fluid ounce}}{2 \text{ tablespoons}} = 9 \text{ fluid ounces}$$

9

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