

1 inch = 2.54 cm (exactly)

1 pound = 453.6 grams

1 hour = 60 minutes (exactly)

1 foot = 12 inches (exactly)

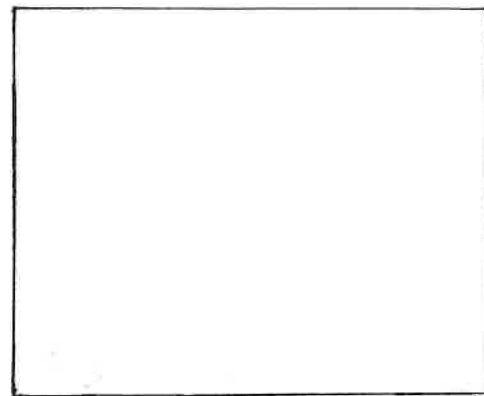
1 mL = 1 cm³ (exactly)

1 mile = 1.61 km

1 mile = 5280. feet

YOU MUST SHOW ALL UNIT FACTORS TO RECEIVE CREDIT!!!**1. Make the following conversions!****a. 3.2 feet to centimeters****b. 4530 inches to miles****c. 26.2 miles to kilometers****d. 10.0 kilometers to miles****e. 3.50 hours to seconds****2a. A spider is moving at 48 feet per hour (ft/hr). Convert this speed to units of centimeters per min (cm/min).****b. A baby whale can gain mass at a rate of 90. kilograms per day! Convert this into pounds per week.****c. A sloth can move at a top speed of about 78 inches per minute. Convert this speed to miles per hour.****d. A cat is eating 64 grams of food per day. Convert 64 g/day into pounds per year (lbs/yr).****3. Make the following conversions:****a. 47000 grams into pounds****b. 1450 seconds into days**

4. Consider the following rectangle, which has a length of 1.32 feet and a width of 1.11 feet.



a. Calculate the area of the rectangle, in square feet.

b. Convert the length and width to inches.

$$(1.32 \text{ feet})(\text{-----}) =$$

$$(1.11 \text{ feet})(\text{-----}) =$$

c. Use your answers to (b) to calculate the area of the rectangle in square inches.

5a. How many square inches are in one square foot? _____

b. How many cubic inches are in one cubic foot? _____

c. Convert 1.0 ft^3 into cm^3 .

d. Convert an area of 444 square centimeters into square feet.

6. A car is moving at a speed of 126 feet per second. Convert this speed to miles per hour.

7. Convert a volume of 1130 cubic inches (in^3) into cubic feet (ft^3)

8. Convert an area of 0.800 square miles (mi^2) into square inches