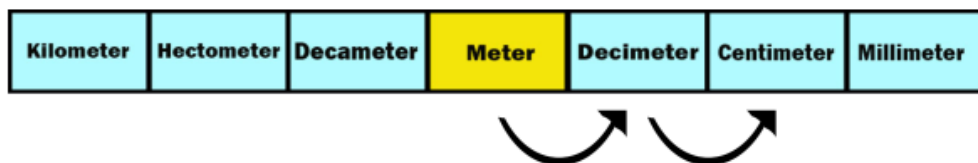# Conversion of Units of Measurement

1) Answer: A

Explanation: The problem is asking us to determine the circumference of the globe in centimeters.

Referring to the table of metric units for length:

Kilometer	Hectometer	Decameter	Meter	Decimeter	Centimeter	Millimeter

There are two steps to the right from meters to centimeters. Thus, to convert 5.6 meters to centimeters, we have to move two decimals to the right.
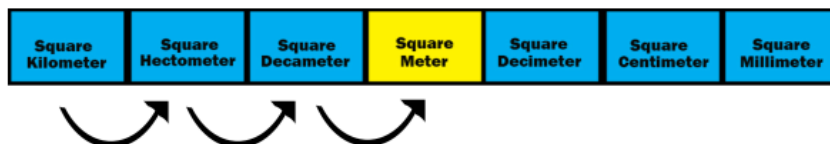
$$5.6 \rightarrow 560.$$

Thus, 5.6 meters is equivalent to 560 centimeters.

2) Answer: C

Explanation: The price of the property is expressed as PHP 1200 per square meter. So, to identify the total price of the property with an area of 0.25 square kilometers, we have to convert it first into m^2:

Referring to the table of metric units for area:

Square Kilometer	Square Hectometer	Square Decameter	Square Meter	Square Decimeter	Square Centimeter	Square Millimeter

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There are three steps to the right from the square kilometer to the square meter. Hence, to convert 0.25 km² into m², we have to move three decimal places to the right.

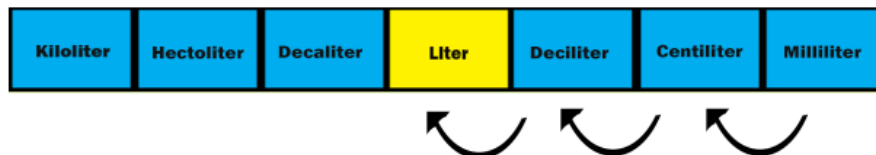$$0.250 \rightarrow 250$$

Hence, 0.25 km² is equal to 250 m².

This means that the property has an area of 250 m². Since the pricing of the property is expressed as PHP 1200 per square meter (m²), we multiply 250 by 1200:

250 x 1200 = 300,000

Thus, the price of the property is PHP 300,000.

3) Answer: C

Explanation: To solve the problem, let's refer to the metric units for volume (Liters):

Kiloliter	Hectoliter	Decaliter	**Liter**	Deciliter	Centiliter	Milliliter

There are three steps to the left from milliliter (mL) to liter (L). Thus, to convert 980 mL to L, we have to move three decimal places to the left.

$$980. \rightarrow 0.980$$

Thus, 980 mL is equivalent to 0.980 L.

4) Answer: D

Explanation: Jon charges his customers PHP 0.75 per minute. To identify how much a customer should pay if she rented a bike for 4 hours, we have to convert 4 hours first into minutes.

Step 1: *Identify the given and to which unit we are going to convert it.*

The given is 4 hours, and we want to convert it into minutes

Step 2: *Determine the relationship between the given units.*

There are 60 minutes in 1 hour or 1 hour = 60 minutes.

Step 3: *Express the relationship between the given units as a conversion factor in a fractional form such that the denominator has a unit that is the same as the original unit.*

The original unit is hours, so express the relationship we have derived from step 2 as a fraction such that the denominator has the unit of an hour: $\frac{60\ minutes}{1\ hour}$

Step 4: *Multiply the given measurement by the conversion factor.*

The given time is 4 hours. So let us multiply 4 hours by $\frac{60\ minutes}{1\ hour}$:

$$4\ hours \times \frac{60\ minutes}{1\ hour}$$

$$4\ hours \times \frac{60\ minutes}{1\ hour}$$

$$4 \times 60 = 240\ minutes$$

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Thus, there are 240 minutes in 4 hours.

Hence, if a customer rented a bike for 4 hours or 240 minutes, she has to pay 240 x 0.75 = 180.

The answer is PHP 180.

5) Answer: A

Explanation: The formula to convert Fahrenheit to Celsius is:

$$°C = \frac{5}{9}(°F - 32)$$

In this problem, we are tasked to convert $86°F$ to $°C$:

$$°C = \frac{5}{9}(°F - 32)$$
$$°C = \frac{5}{9}(86 - 32)$$
$$°C = \frac{5}{9}(54)$$
$$°C = 270/9 = 30$$

Hence, $86°F$ is equivalent to $30°C$.