Curriculum Outcome

M3: Solve problems using SI and imperial units that involve linear measurement using estimation and measurement strategies
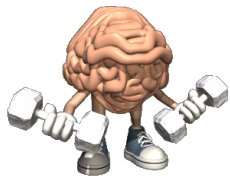
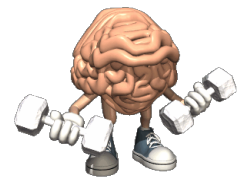Student Friendly: The relationship between measurement units such as

1 m = 1.0936 yd

1 m = 3.2808 ft

1 mi= 1.6093 km
1 in = 2.54 cm

Warm Up

Quiz

4.2 - Converting Measurements

$62\ mi. = \underline{\qquad}\ km$

$62\ mi.$

$= 99.8$

Make Connections

Two cars are driven in opposite directions from a Canada/United States border crossing.

— drove →

In one hour, Hana drove 62 mi. south while Farrin drove 98 km north.

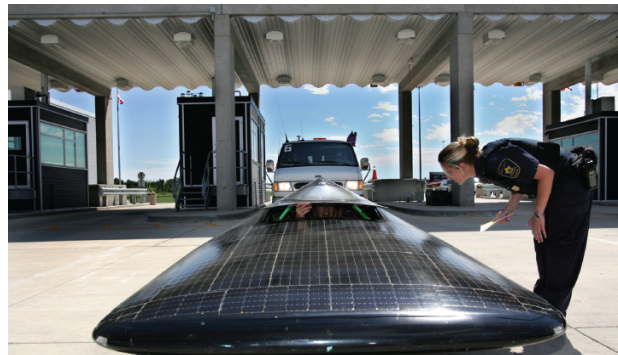How could you determine which vehicle travelled farther from the border?

$62\ mi = \underline{\qquad}\ km$

$62 \times \dfrac{1.6093\ km}{mi.}$

$= 99.8\ km$

Each measurement in the imperial system relates to a corresponding measurement in the SI system.

This table shows some approximate relationships between imperial units and SI units.

SI Units to Imperial Units	Imperial Units to SI Units
1 mm ≐ ?	1 in. ≐ ?
1 cm ≐ ?	1 ft. ≐ ?
	1 ft. ≐
1 m ≐ ?	1 yd. ≐ ?
1 m ≐	1 yd. ≐
1 km ≐ ?	1 mi. ≐ ?

We can use the data in the table above to convert between SI and imperial units of measure.

1.3 Relating SI and Imperial Units

Sor
exa
1 in
1 y

MUST KNOW CONVERSIONS...

Imperial Conversion

1 ft = 12 in

1 yd = 3 ft

1 mi = 1760 yd

Metric Conversions

1 km = 1000 m

1 m = 100 cm

1 cm = 10 mm

Between SI and Imperial

1 m = 1.0936 yd

1 m = 3.2808 ft

1 mi. = 1.6093 km

1 in. = 2.54 cm

PRACTICE: Concerting IMPERIAL to METRIC

4. Convert each measurement. Answer to the nearest tenth.

a) 16 in. to centimetres

$$16 \text{ in} = \underline{} \text{ cm}$$

$$16 \text{ in} \times \frac{2.54 \text{ cm}}{1} $$

$$= 40.6$$

or

$$16 \text{ in} \times \frac{1 \text{ cm}}{0.3937 \text{ in}}$$

$$40.6 \text{ cm}$$

b) 4 ft. to metres

$$4 \text{ ft} = \underline{} \text{ m}$$

$$4 \text{ ft} \times \frac{0.3048 \text{ m}}{1 \text{ ft}}$$

or

$$4 \text{ ft} \times \frac{1 \text{ m}}{3.2808 \text{ ft}}$$

$$= 1.2 \text{ m}$$

1.3 Relating SI and Imperial Units

Attachments

Worksheet - Converting Measurements.docx

Worksheet - Converting Imperial Lengths.docx