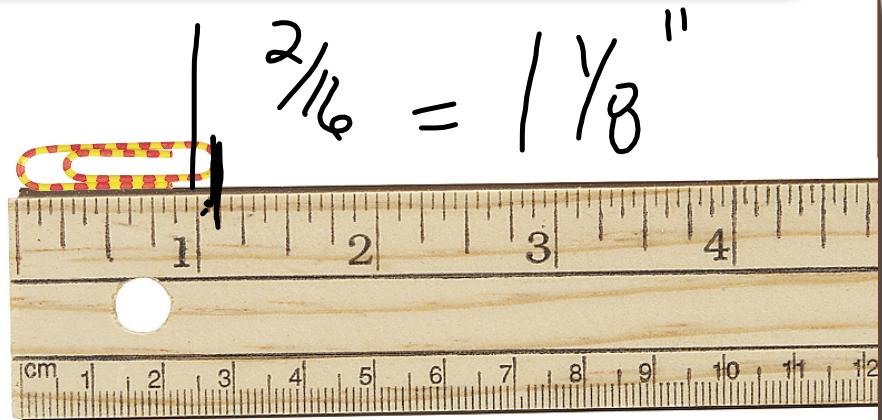




1 What is the length of the paper clip?

- A 1 in.
- B $1\frac{1}{8}$ in.
- C $1\frac{1}{2}$ in.





4.2 - Converting Measurements

$$62 \text{ mi} \times \frac{1.6093 \text{ km}}{1 \text{ mi}} = 99.8 \text{ km}$$

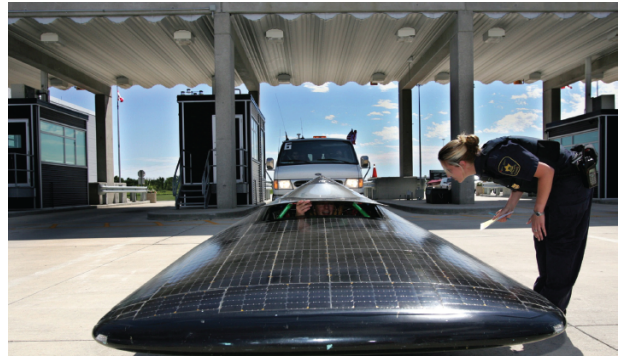
*Hana
Drove
fartherest*

Make Connections

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

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?



THE CONVERSION FACTORS BETWEEN SI AND IMPERIAL UNITS

SI to Imperial

$$1 \text{ mm} = 0.0394 \text{ in}$$

$$1 \text{ cm} = 0.3937 \text{ in}$$

$$1 \text{ m} = 3.2808 \text{ ft}$$

$$1 \text{ m} = 1.0936 \text{ yd}$$

$$1 \text{ km} = 0.6214 \text{ mi}$$

Imperial to SI

$$1 \text{ in} = 25.4 \text{ mm}$$

$$1 \text{ inch} = 2.54 \text{ cm}$$

$$1 \text{ ft} = 0.3048 \text{ m}$$

$$1 \text{ yd} = 0.9144 \text{ m}$$

$$1 \text{ mi} = 1.6093 \text{ km}$$

MUST KNOW CONVERSIONS...

$$1 \text{ m} = 1.0936 \text{ yd}$$

$$1 \text{ m} = 3.2808 \text{ ft}$$

$$1 \text{ mi.} = 1.6093 \text{ km}$$

$$1 \text{ in.} = 2.54 \text{ cm}$$

PRACTICE: Converting IMPERIAL to METRIC

Convert each measurement. Answer to the nearest tenth.

- a) 16 in. to centimetres
- b) 4 ft. to metres
- c) 5 yd. to metres
- d) 1650 yd. to kilometres
- e) 6 mi. to kilometres
- f) 2 in. to millimetres

$$a) \cancel{16 \text{ in.}} \times \frac{2.54 \text{ cm}}{\cancel{1 \text{ in.}}} = 40.6 \text{ cm}$$

$$b) 4 \cancel{\text{ft}} \times \frac{1 \text{ m}}{3.2808 \cancel{\text{ft}}} = 1.2 \text{ m}$$

$$c) 5 \cancel{\text{yd}} \times \frac{1 \text{ m}}{1.0936 \cancel{\text{yd}}} = 4.6 \text{ m}$$

$$d) 1650 \cancel{\text{yd}} \times \frac{1 \text{ mi.} \times 1.6093 \text{ km}}{1760 \cancel{\text{yd}} \times 1 \text{ mi}} = 1.5 \text{ km}$$

Answers will vary depending on the conversion ratio

- | | |
|---------------|------------|
| 4. a) 40.6 cm | b) 1.2 m |
| c) 4.6 m | d) 1.5 km |
| e) 9.7 km | f) 50.8 mm |

PRACTICE: Converting METRIC to IMPERIAL

Convert each measurement.

- a) 25 mm to the nearest inch
- b) 2.5 m to the nearest foot
- c) 10 m to the nearest yard
- d) 150 km to the nearest mile

$$a) \quad 25 \text{ cm} \times \frac{1 \text{ in}}{2.54 \text{ cm}} = 1 \text{ in}$$

$$b) \quad 2.5 \text{ m} \times \frac{3.2808 \text{ ft}}{1 \text{ m}} = 8.2 \text{ m}$$



Answers will vary depending on the conversion factor used.

5. a) 1 in.

b) 8 ft.

c) 11 yd.

d) 93 mi.

HOMework...

 Worksheet - Converting Measurements.docx

Attachments

Worksheet - Converting Measurements.docx