

TRY THIS ONE...

A retail fabric store advertises a storewide sale. It lists a certain material for \$0.89/yd. A fabric warehouse is selling the same material for \$0.93/m.

- Which store has the better price?
- Use mental math and estimation to justify that the answer is reasonable.

$$\begin{aligned} \$0.89/\text{yd} \times \frac{1.0936 \text{ yd}}{1 \text{ m}} &= \$0.973304/\text{m} \\ &= \$0.97/\text{m} \end{aligned}$$

Warehouse is cheaper by \$0.04/m



LAND AREAS...

The imperial unit to measure an area of land is the *acre*. During the initial agricultural expansion of the western provinces, the Canadian government offered 160 acres of land free to settlers who were willing to immigrate to Canada. Today, Canada uses the *hectare* to measure land area:

$$1 \text{ hectare} \doteq 2.471 \text{ acres}$$

- ✓ a) How many hectares did each settler receive?
 b) One hundred sixty acres is a square with a side length of one-half a mile. How many hectares are in one square mile?



18. a) Approximately 65 hectares
 b) Approximately 259 hectares

$$160 \text{ acres} \times \frac{1 \text{ hectares}}{2.471 \text{ acres}} = 64.75 \text{ hectares}$$
$$64.75 \times 4 \text{ hectares} = 259 \text{ hectares in a square mile}$$

1.3 Relating SI and Imperial Units

CHECK YOUR UNDERSTANDING

1. A Canadian football field is approximately 59 m wide.

What is this measurement to the nearest foot?

$$59 \text{ m} \times \frac{1.0936 \text{ yd}}{1 \text{ m}} \times \frac{3 \text{ ft}}{1 \text{ yd}} = 194$$



1.3 Relating SI and Imperial Units



CHECK YOUR UNDERSTANDING

3. Nora knows that she is 5 ft. 7 in. tall.
- What height in centimetres will she list on her driver's license application?
 - Use mental math and estimation to justify that the answer is reasonable.

Change to inches

$$5'7'' = 67''$$

$$67'' \times \frac{2.54 \text{ cm}}{1 \text{ in}} = 170.18 \text{ cm}$$



[Answer: a) 168 cm]



1.3 Relating SI and Imperial Units

Class / Homework

Worksheet Section 4.2 Conversion

Attachments

Worksheet - Converting Measurements.docx