

Complete the table below...

Object	mm	ft	yd	cm	in	m
Thickness of hardwood floor	19			1.9		0.019
Height of a room		9	3		108	
Width of a football field		165	55		1980	
Length of a pencil	180			18		0.18
Height of a table					29	
A home run in baseball	135000			13500		135

$1 \text{ cm} = 10 \text{ mm}$
 $1 \text{ m} = 100 \text{ cm}$

$135 \text{ m} \times \frac{100 \text{ cm}}{1 \text{ m}} \times \frac{10 \text{ mm}}{1 \text{ cm}}$
 $9 \text{ ft} \times \frac{1 \text{ yd}}{3 \text{ ft}}$

$55 \text{ yd} \times \frac{3 \text{ ft}}{1 \text{ yd}} \times \frac{12 \text{ in}}{1 \text{ ft}}$

Friday

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

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

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

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

WARM-UP...

The tallest structure in Canada is the CN Tower in Toronto. It is 553.3 m tall. The tallest structure in the United States is the Willis Tower, previously known as the Sears Tower, in Chicago. It is 1451 ft. tall.

- Determine the height of the CN Tower in feet and the height of the Willis Tower in metres.
- Which structure is taller? Explain how you know. *CN Tower*
- Determine the difference in the heights of the structures, in metres and to the nearest foot.



$$a) 553.3 \text{ m} \times \frac{3.2808 \text{ ft}}{1 \text{ m}} = 1815.2 \text{ ft}$$

$$1451 \text{ ft} \times \frac{1 \text{ m}}{3.2808 \text{ ft}} = 442.3 \text{ m}$$



Answers will vary depending on the conversion ratios used

13. a) CN Tower: approximately 1815 ft.;

Willis Tower: approximately 442.3 m

b) CN Tower

c) 111 m; 364 ft.

1.3 Relating SI and Imperial Units

HOMWORK Solutions...

Name : _____ Score : _____

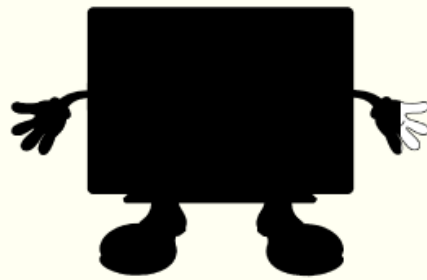
Teacher : _____ Date : _____

Converting English and Metric

- 1) 22 miles = 35.41 kilometers
- 2) 12 yards = 10.97 meters
- 3) 10 miles = 16.09 kilometers
- 4) 12.12 miles = 19.5 kilometers
- 5) 5.91 inches = 15 centimeters
- 6) 9.84 yards = 9 meters
- 7) 7 inches = 17.78 centimeters
- 8) 3.83 yards = 3.5 meters
- 9) 6.5 inches = 16.5 centimeters
- 10) 5.28 miles = 8.5 kilometers
- 11) 4.92 yards = 4.5 meters 4.5 m x 1.0936 yd / 1 m
- 12) 4 miles = 6.44 kilometers
- 13) 11 yards = 10.06 meters
- 14) 2 yards = 1.83 meters
- 15) 14.5 inches = 36.83 centimeters
- 16) 17 inches = 43.18 centimeters
- 17) 11.5 miles = 18.51 kilometers
- 18) 20.23 yards = 18.5 meters
- 19) 4.92 inches = 12.5 centimeters
- 20) 13.05 miles = 21 kilometers

Interface for a unit conversion activity. It features a top navigation bar with buttons for 'Edit', 'Check', 'Reset', 'Solve', and a help icon. Below is a table with two columns: 'Word' and 'Description'. The 'Word' column contains five empty input boxes. The 'Description' column contains five rows of text and corresponding unit buttons: '2 1/2 centimeters' with an 'Inch' button, '39 1/2 inches' with a 'Yard' button, '12 inches' with a 'Foot' button, '36 inches' with a 'Yard' button, and '3 feet' with a 'Meter' button.

Word	Description
<input type="text"/>	2 1/2 centimeters <input type="button" value="Inch"/>
<input type="text"/>	39 1/2 inches <input type="button" value="Yard"/>
<input type="text"/>	12 inches <input type="button" value="Foot"/>
<input type="text"/>	36 inches <input type="button" value="Yard"/>
<input type="text"/>	3 feet <input type="button" value="Meter"/>



Loading 94.25%

The interface consists of a blue-bordered window. At the top, there is a navigation bar with five buttons: 'Edit', 'Check', 'Reset', 'Solve', and a circular help icon with a question mark. Below the navigation bar is a large white area divided into a 3x2 grid. The columns are labeled 'inches', 'feet', and 'yards' at the top. At the bottom of the grid, there are six buttons arranged in two rows of three. The buttons contain the following text: 'pencil', 'arm', 'door' in the first row, and 'refridgerator', 'flag pole', 'book' in the second row.

Example 3 Solving a Problem that Involves Unit Conversions

Alex is 6 ft. 2 in. tall. To list his height on his driver's license application, Alex needs to convert this measurement to centimetres.

What is Alex's height to the nearest centimetre?

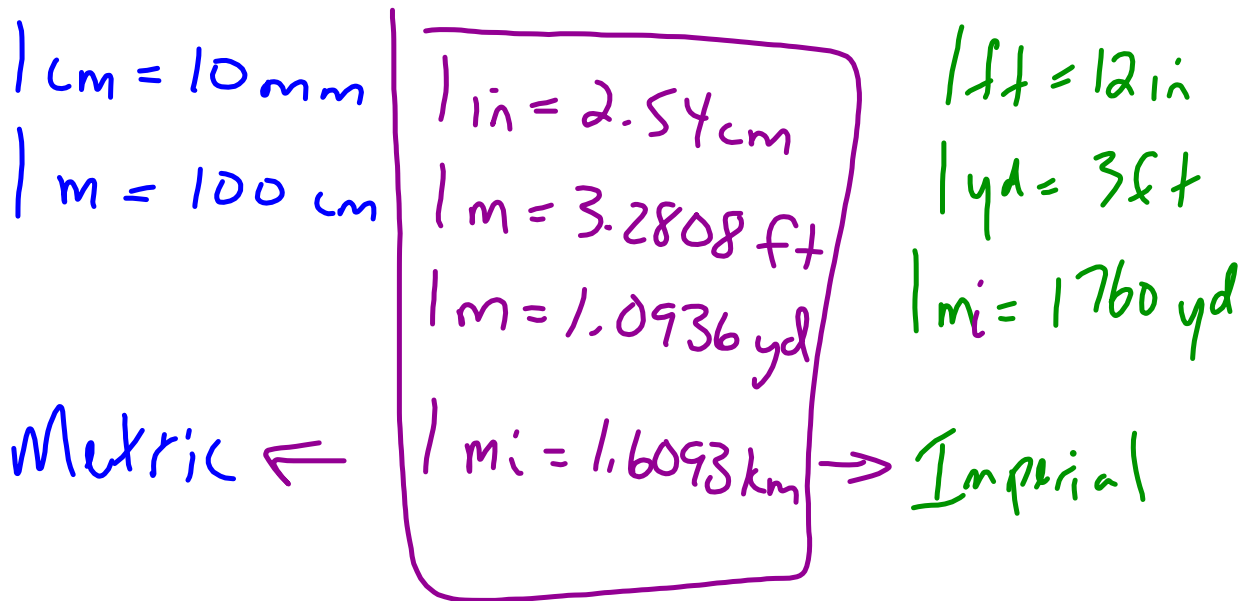
✓ **SOLUTION**
(Erase to reveal)

$$6 \text{ ft} \times \frac{12 \text{ in}}{1 \text{ ft}} = 72 \text{ in}$$

$$72 + 2 = 74 \text{ in}$$

$$74 \text{ in} \times \frac{2.54 \text{ cm}}{1 \text{ in}} = 188 \text{ cm}$$

1.3 Relating SI and Imperial Units



HOMEWORK... Finish conversion table

p. 159 #1 - 4, ~~6~~, 8