

Name \_\_\_\_\_

Date \_\_\_\_\_

Period \_\_\_\_\_

### Football Field Conversions

The dimensions of a regulation football field are 100 yards X 53.5 yards when measured goal to goal and sideline to sideline. The purpose of this lab is to practice conversions. Use the metric conversion table (next page) to complete this lab.

Calculate the length and width for the following units.

ENGLISH

\_\_\_\_\_ ft X \_\_\_\_\_ ft

\_\_\_\_\_ in X \_\_\_\_\_ in

\_\_\_\_\_ mi X \_\_\_\_\_ mi

METRIC

\_\_\_\_\_ m X \_\_\_\_\_ m

\_\_\_\_\_ cm X \_\_\_\_\_ cm

\_\_\_\_\_ nm X \_\_\_\_\_ nm

Calculate area for the following units:

\_\_\_\_\_ ft<sup>2</sup>

\_\_\_\_\_ m<sup>2</sup>

\_\_\_\_\_ acres

\_\_\_\_\_ yd<sup>2</sup>

\_\_\_\_\_ cm<sup>2</sup>

\_\_\_\_\_ hectares

\_\_\_\_\_ mi<sup>2</sup>

Assuming that the field is 1ft deep in water, calculate the volume of water on the field.

\_\_\_\_\_ gal

\_\_\_\_\_ L

\_\_\_\_\_ ft<sup>3</sup>

\_\_\_\_\_ mL

\_\_\_\_\_ in<sup>3</sup>

\_\_\_\_\_ hectare-meter

\_\_\_\_\_ acre-feet

### Metric Conversion Table

$$1 \text{ ft} = .3048 \text{ m}$$

$$1 \text{ ft} = 12 \text{ in}$$

$$1 \text{ mile} = 5,280 \text{ ft}$$

$$1 \text{ yd} = 3 \text{ ft}$$

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

$$1 \times 10^9 \text{ nm} = 1 \text{ m} \text{ or } 1 \text{ nm} = 1 \times 10^{-9} \text{ m}$$

$$1 \times 10^{10} \text{ \AA} = 1 \text{ m} \text{ or } 1 \text{ \AA} = 1 \times 10^{-10} \text{ m}$$

$$9 \text{ ft}^2 = 1 \text{ yd}^2$$

$$43,560 \text{ ft}^2 = 1 \text{ acre}$$

$$1 \text{ acre} = .4047 \text{ hectares}$$

$$1 \text{ ft}^2 = .0929 \text{ m}^2$$

$$1 \text{ ft}^3 = 7.48 \text{ gallons}$$

$$1 \text{ gallon} = 3.79 \text{ L} = .133 \text{ ft}^3$$

$$43,560 \text{ ft}^3 = 1 \text{ acre-ft} = 1 \text{ acre} \times 1 \text{ ft}$$