Lesson 2.1

Name: _____

Units of Area and Volume

Show You Know

Ex. 1	Ex. 2	Ex. 3
a) Determine the area of a rectangle that is 1.7 m by 2.5 m, in square centimeters.	a) Determine the area of a rectangle that is 10 cm by 100 cm, in square feet.	Convert the volume of an object that measures 3 cm by 4 cm by 10 cm to cubic inches.
b) Determine the area of a rectangle that is 50 mm by 25 mm, in square meters.	b) Determine the area of a rectangle that is 6 in. by 4 in., in square millimeters.	

Practice

1. Determine the areas to the indicated unit when given the following dimensions. Express each answer to the nearest hundredth of a square unit where necessary.

   a. A rectangle measuring 4 in. by 6 in. into cm^2.

   b. A rectangle measuring 2 ft. by 2.5 ft. into m^2.

   c. A rectangle measuring 42 cm by 18 cm into m^2.

   d. A rectangle measuring 1.2 m by 2.5m. into ft^2

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2. The drama club sells advertising space in their playbill. The cost of an ad depends on the size of the ad. Each square centimeter cost $0.25. If the available space on each page of the playbill is 8" by 10.5", what is the cost of a full page ad?

3. Amy is organizing a day for volunteers to clean up litter in a park.

   a. She estimates that each volunteer will fill one large garbage bag. Each bag measures 19 in. by 11 in. by 34 in. Determine the capacity of each bag in cubic feet.

   b. Amy needs to rent a dumpster for the litter. She can choose either a dumpster with a capacity of 10 yd^3 or one with a capacity of 15 yd^3. If 80 volunteers have signed up, which dumpster should she rent? Justify your answer mathematically.