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# Mr. Tu's Excellent Examples

## Module 12 Baseball Groundskeeper

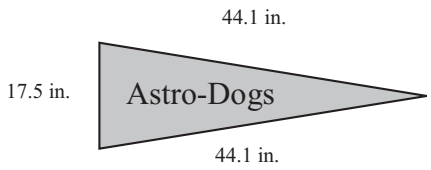
**Use the picture on page 100 of the official dimensions of a major league baseball field to solve any questions concerning the baseball field.**

**Applying Lesson 12.1**

1. When a batter hits a homerun he runs the perimeter of the infield. If each side is the distance between the bases, how far does the batter run?

2. The pitcher's mound has an 18-foot diameter. What is the circumference of the pitcher's mound?

3. Look at the baseball pennant below. What is the perimeter of the pennant?




**Applying Lesson 12.2**

1. What is the area of the portion of the infield inside the bases?

2. What is the area of the pitcher's mound?

3. The home plate circle has a diameter of 26 feet. What is the area of the home plate circle?

4. The on-deck circle has a diameter of 5 feet. What is the area of the on-deck circle?

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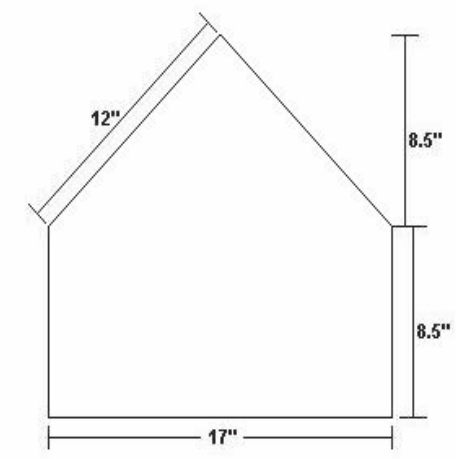
**Applying Lesson 12.3**

1. Look at the diagram of the home plate. What is the area in square inches?




2. Each batter's box measures 4 feet by 6 feet. What is the area of a 26-foot diameter home plate circle without the batter's boxes?

**Applying Lesson 12.4**

1. The groundskeeper at a baseball stadium rolls the field with a cylinder that is 6 feet wide and has a diameter of 5 feet. How much area is covered with each turn of the roller? (Hint: This can be computed by calculating the lateral surface area of the cylinder.)

2. A baseball has a 9-inch circumference. What is the surface area of a baseball? (Hint: First, determine the radius to the nearest hundredth.)

**Applying Lesson 12.5**

1. A contractor is pouring pier foundations (cylinders) at a baseball stadium to support new light poles. Each foundation has a 6-foot diameter and is 25 feet deep. How many cubic feet of concrete will this foundation contain?

2. For publicity, a baseball team created a giant baseball-shaped balloon. The balloon will have a 10-foot radius. To determine how much helium will be required to fill the balloon, the volume of the balloon must be calculated. What is the volume of the balloon in cubic feet?

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**Applying Lesson 12.6 and 12.7**

1. The baseball team uses cone-shaped paper cups for their water. The cups have a diameter of 7 centimeters and a height of 10 centimeters. To the nearest centimeter, how many cubic centimeters of water can each cup contain?

2. What is the lateral surface area of each cup? The slant height is 10.3 centimeters.

**Use this diagram of the official dimensions of a major league baseball field to solve the questions concerning a baseball field.**