Chapter Overview  One way that you can help your student succeed in Chapter 11 is by discussing the lesson goals in the chart below. When a lesson is completed, ask your student to interpret the lesson goals for you and to explain how the mathematics of the lesson relates to one of the key applications listed in the chart.

<table>
<thead>
<tr>
<th>Lesson Title</th>
<th>Lesson Goals</th>
<th>Key Applications</th>
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| 11.1: Angle Measures in Polygons | Find the measures of interior and exterior angles of polygons. Use measures of angles of polygons to solve real-life problems. | • Softball Home Plate  
• Stained Glass Windows  
• Houses and Tents |
| 11.2: Areas of Regular Polygons | Find the area of an equilateral triangle. Find the area of a regular polygon.  | • Foucault Pendulums  
• Basaltic Columns  
• Telescopes |
| 11.3: Perimeters and Areas of Similar Figures | Compare perimeters and areas of similar figures. Use perimeters and areas of similar figures to solve real-life problems. | • The Chicago Board of Trade  
• Taliesin West Triangular Pool  
• Fort Jefferson |
| 11.4: Circumference and Arc Length | Find the circumference of a circle and the length of a circular arc. Use circumference and arc length to solve real-life problems. | • Tire Revolutions  
• Track Length  
• Bicycles |
| 11.5: Areas of Circles and Sectors | Find the area of a circle and of a sector of a circle. Use areas of circles and sectors to solve real-life problems. | • Boomerangs  
• Lighthouses  
• Viking Longships |
| 11.6: Geometric Probability | Find a geometric probability. Use geometric probability to solve real-life problems. | • Trolley Ride  
• Ship Salvage  
• Archery |

Test-Taking Strategy

Staying Relaxed is the test-taking strategy featured in Chapter 11 (see page 712). Have your student practice techniques to stay relaxed and control panic during a test. Encourage your student to put his or her pencil down and take a few deep breaths if he or she starts to panic. Remind your student that no single test will determine his or her future.
Name ____________________________________________ Date ____________

11.1 The measure of each interior angle of a regular polygon is 108°. What type of regular polygon is it?

11.2 A floor tile is in the shape of a regular hexagon that is 5 inches on a side and has a radius of 5 inches. What is the approximate area of the tile? Find the minimum number of tiles it would take to cover the floor of a 5-foot by 8-foot entry.

11.3 The Square Pizza Place sells pizzas that are square. The regular pizza is 11 inches on a side and costs $8.99. At the same rate, how much should the Square Pizza Place charge for the Jumbo, which is 16.5 inches on a side?

11.4 An archeologist finds a part of a circular pottery plate. The outer rim of the piece is about 39 centimeters in length. The archeologist determines the outer rim represents an 80° arc. What was the original circumference of the plate?

11.5 A goat is tethered by a rope to the corner of a building and can graze in an area that is a circle minus a 90° sector cut by the building. If the rope is 12 feet long, what is the approximate area where the goat can graze?

11.6 A dart is equally likely to land on any point on a 15-inch by 20-inch dart board. Find the probability it lands in the bull’s eye, which is a circle of diameter 6 inches in the center of the board.

Home Involvement Activity

You Will Need: Drawing materials
Directions: Work together to design a dream kitchen with a semicircular, bay breakfast nook. Find the floor area of the kitchen. Add cabinets, appliances, and possibly a cooking island to your design plans. Find the area that would need flooring. Research the cost of the flooring type you would choose if money was not a factor. Then calculate the cost for flooring in your dream kitchen.

Answers

11.1: About 5 in.
11.2: About 65 in.
11.3: About 320 ft²
11.4: About 18 in.
11.5: About 65 in.
11.6: About 9.4%