March 30, 2016

Learning Target Quiz

1. **Multiple Choice** What is the area of the figure?
   - A. 90 cm²
   - B. 96 cm²
   - C. 112 cm²
   - D. 126 cm²

2. Find the area of the trapezoid below.
   - A. 108
   - B. 216
   - C. 135
   - D. 189

3. Find the area of the rhombus below.
   - A. 600
   - B. 2400
   - C. 300
   - D. 1200

4. The area of a kite is 100 cm². The length of one diagonal is 20 cm. Which is a possible length of the other diagonal?
   - A. 12 cm
   - B. 20 cm
   - C. 25 cm
   - D. 40 cm

5. Find the length of each side of a 20-gon if a = 80
   and the area is approx. 20000 sq. ft.
   - A. 500
   - B. 125
   - C. 20
   - D. 25

6. Find the arc length of the circle below.
   - A. \(18\pi\)
   - B. \(6\pi\)
   - C. \(27\pi\)
   - D. \(3\pi\)

7. Find the value of "h" in the parallelogram below.
   - A. 234
   - B. 216
   - C. 16.61
   - D. 19.5
10.8 Geometric Probability

Learning Targets: The students will learn to use area models to find probabilities of events.

A.

We can find the probability of an event occurring by taking the area of the favorable outcome area (what we want to happen) and dividing it by the total outcome area (everything that can happen).

\[
\frac{\text{Area of favorable outcome}}{\text{Total Area}}
\]
B. Problems

1. What is the probability that a dart thrown at the following board will hit within the triangle area?

\[
\text{Area of triangle: } \frac{1}{2}(8)(12) = 48 \\
\text{Area of board: } (8)(24) = 192 \\
\text{Probability: } \frac{48}{192} = \frac{1}{4}
\]

2. What is the probability a dart will hit in the blue area of the dart board? The dartboard is a 1-ft square board and the radius of the red circle is 1 in. and the blue circle is 2 in.

\[
\text{Radius of blue circle: } 2 \text{ in} \\
\text{Area of large circle: } \pi \cdot 12^2 = 144\pi \\
\text{Area of small circle: } \pi \cdot 6^2 = 36\pi \\
\text{Probability: } \frac{36\pi}{144\pi} \approx 0.7 \rightarrow 7\%
\]

Question: “Does this really seem like a random event?”

Homework

Pg. 584 #8-13, 21, 23, 24, 25