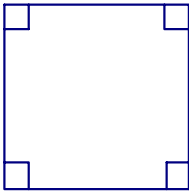


Notes #14: Area of Regular Polygons (Section 11.4)

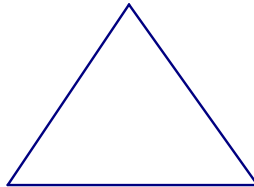
Regular Polygons: All _____ congruent, all _____ congruent.

Common Examples:

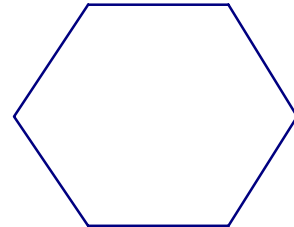
Square



Equilateral Triangle



Hexagon



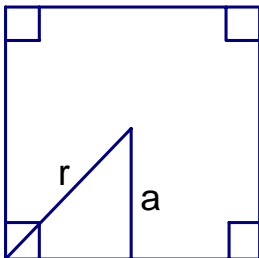
Key Info:

apothem (a) = _____

radius (r) = _____

Area of a Regular Polygon

Find the missing information:



#1 - 2

$$r = 3\sqrt{2}$$

$$a = \underline{\hspace{2cm}}$$

1.) side length = _____

$$P = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}}$$

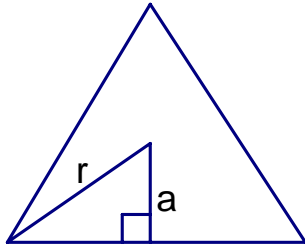
$$r = \underline{\hspace{2cm}}$$

$$a = 4$$

2.) side length = _____

$$P = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}}$$



#3 - 4

$$r = \underline{\hspace{2cm}}$$

$$a = 3$$

3.) side length = $\underline{\hspace{2cm}}$

$$P = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}}$$

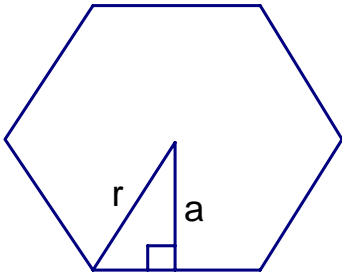
$$r = \underline{\hspace{2cm}}$$

$$a = \underline{\hspace{2cm}}$$

4.) side length = $\underline{\hspace{2cm}}$

$$P = 6\sqrt{3}$$

$$A = \underline{\hspace{2cm}}$$



#5 - 6

$$r = \underline{\hspace{2cm}}$$

$$a = 4\sqrt{3}$$

5.) side length = $\underline{\hspace{2cm}}$

$$P = \underline{\hspace{2cm}}$$

$$A = \underline{\hspace{2cm}}$$

$$r = \underline{\hspace{2cm}}$$

$$a = \underline{\hspace{2cm}}$$

6.) side length = $\underline{\hspace{2cm}}$

$$P = 24$$

$$A = \underline{\hspace{2cm}}$$

7.) Find the area of a square with radius 6.

8.) Find the area of a regular hexagon with perimeter $64\sqrt{3}$