

2.

Find the areas of equilateral triangles with the following sides:

b. 7

d. $2\sqrt{3}$

3.

Find the areas of the equilateral triangles with the following apothems.

b. 4

d. $2\sqrt{3}$

4.

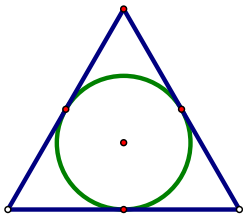
Find, to the nearest tenth, the area of a regular hexagon whose

b. side is 8

d. apothem is 8

10.

Find the area of a equilateral triangle if the radius of its inscribed circle is 3.



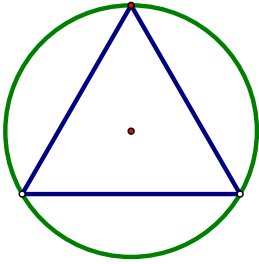
11.

Find the area of a regular hexagon if the radius of its inscribed circle is 12.

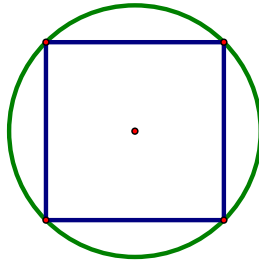
15.

A circle of radius 12 is circumscribed about each regular polygon below. Find the area of each polygon.

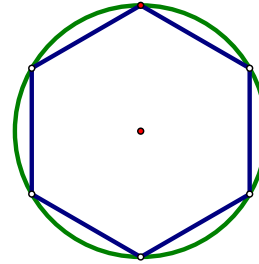
a.



b.



c.



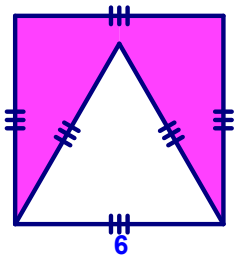
16.

A circle is inscribed in one regular hexagon and circumscribed about another. If the circle has a radius of 6, find the ratio of the area of the smaller hexagon to the area of the larger hexagon.

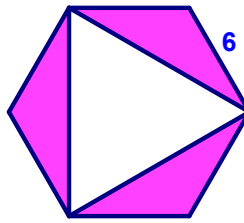
17.

Find the area of the shaded region in each polygon (assume regular polygons).

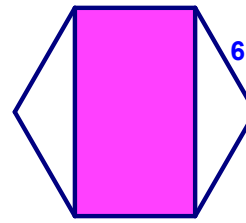
a.



b.



c.



18.

Suppose you are given a scalene triangle, an equilateral triangle, a kite, a square, a regular octagon, and a regular hexagon. If you choose two of the six figures at random, what is the probability that both have apothems?

23.

A square is inscribed in an equilateral triangle as shown. Find the area of the shaded region.

