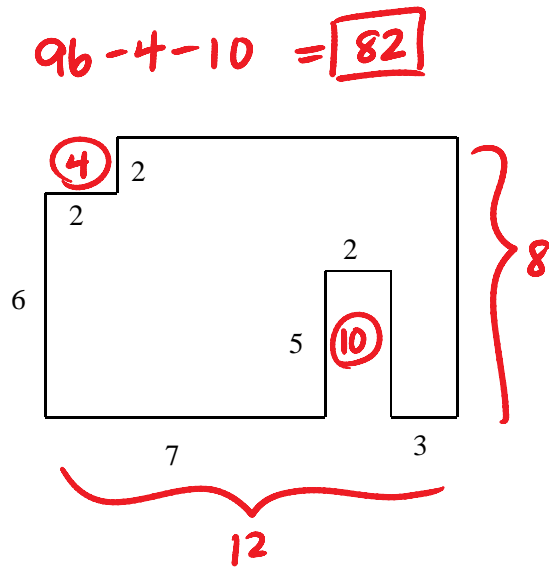
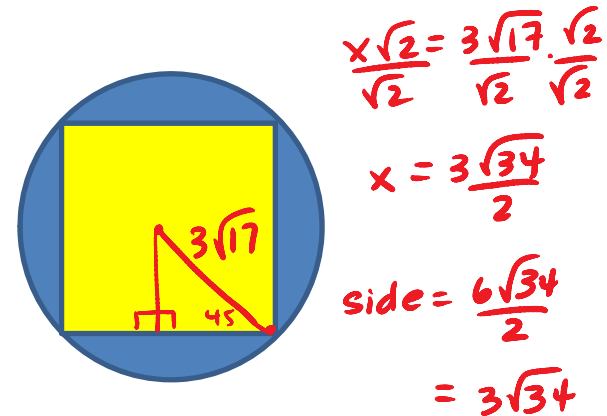


Chapter 11.1-11.5 Study Guide

1. Find the area of the figure.

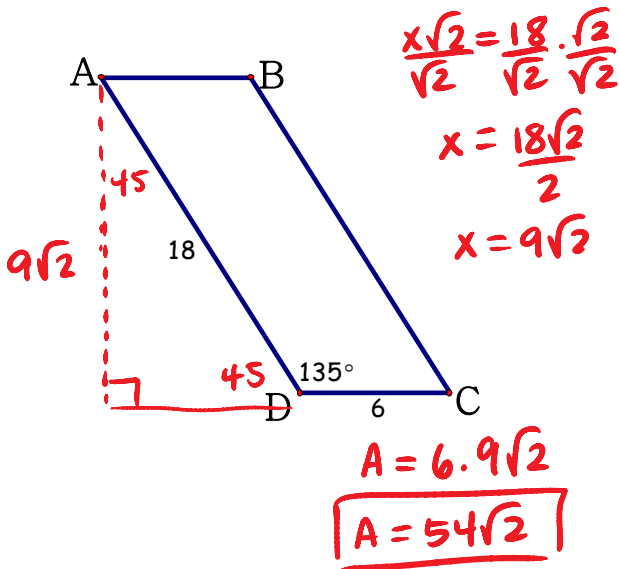


2. The radius of the circle is  $3\sqrt{17}$ . Find the area of the square inscribed in the circle.

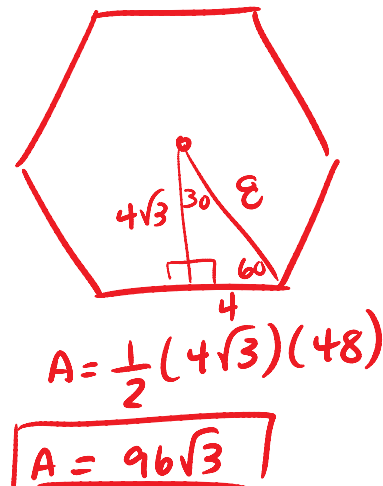


$A = 3\sqrt{34} \cdot 3\sqrt{34}$   
 $= 9 \cdot 34 = \boxed{306}$

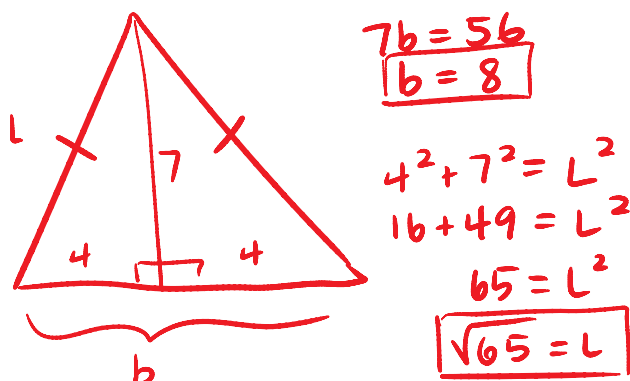
3. Determine the area of the parallelogram ABCD.



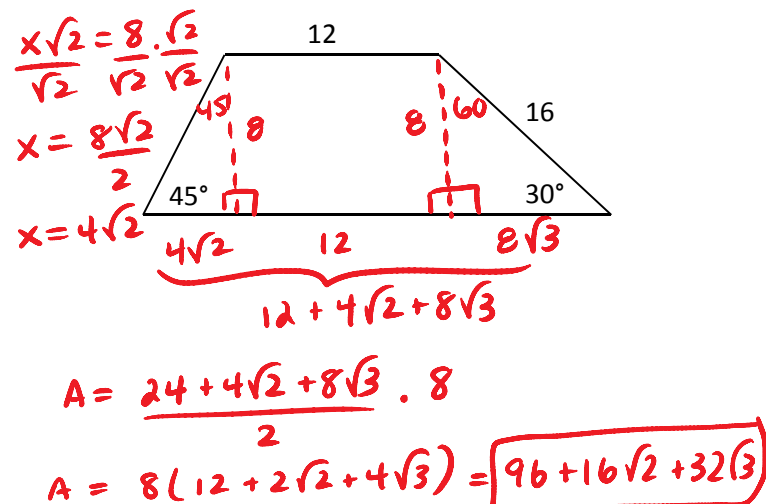
4. The radius of a regular hexagon is 8. Find Area.



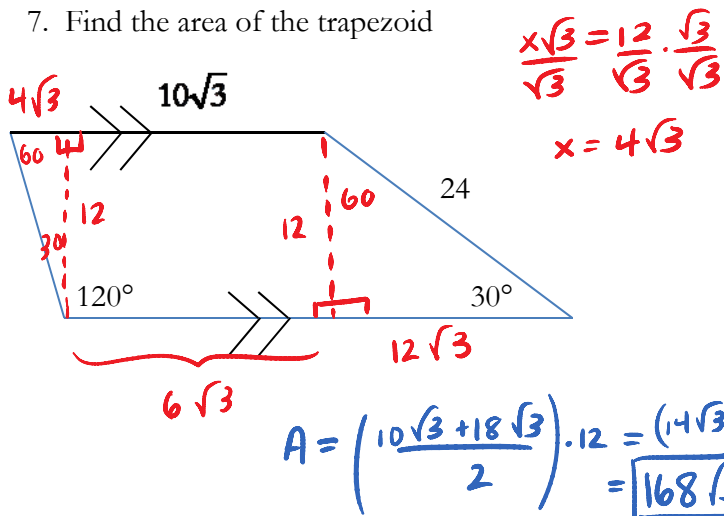
5. The area of an isosceles triangle is 56. The height to the base of the triangle is 7. Find the length of the base and a leg of the isosceles triangle.



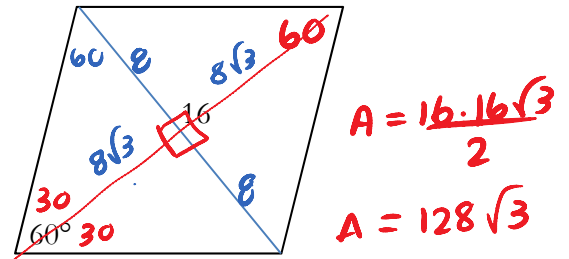
6. Find the area of the trapezoid



7. Find the area of the trapezoid



8. Find the area of the rhombus



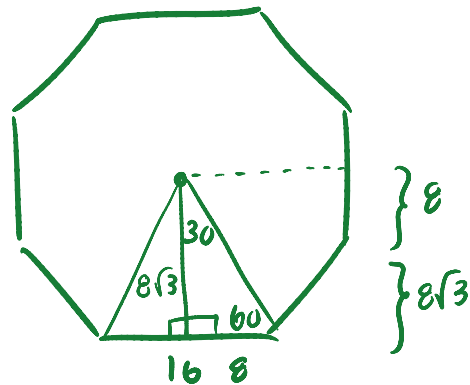
9. Find the area of a regular octagon with side length of 16

$$A = \frac{1}{2}aP$$

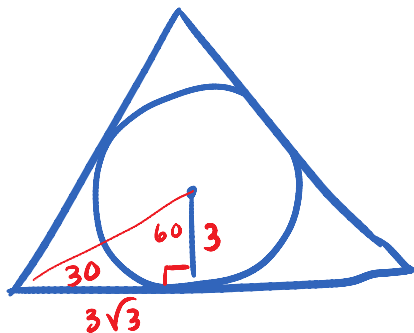
$$A = \frac{1}{2}(8 + 8\sqrt{3})(96)$$

$$A = 48(8 + 8\sqrt{3})$$

$$A = 384 + 384\sqrt{3}$$



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



side =  $6\sqrt{3}$

$$A = \frac{(6\sqrt{3})^2 \sqrt{3}}{4}$$

$$A = \frac{36 \cdot 3\sqrt{3}}{4}$$

$$A = 27\sqrt{3}$$

10. CHALLENGE (from pg. 535)

A square is formed by joining the midpoints of alternate sides of a regular octagon. A side of the octagon is 10.

- Find the area of the square.
- Find the area of the shaded region

$$\text{diag} = 10 + 10\sqrt{2}$$

$$A = \frac{d_1 \cdot d_2}{2} = \frac{(10 + 10\sqrt{2})(10 + 10\sqrt{2})}{2}$$

$$= \frac{100 + 100\sqrt{2} + 100\sqrt{2} + 100(2)}{2}$$

$$= 150 + 100\sqrt{2}$$

