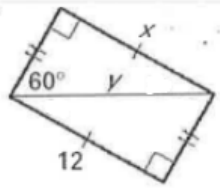
Honors Geometry

Practice Worksheet (Special Right Triangles)

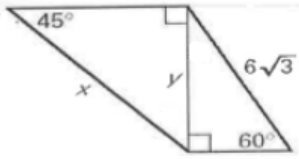
Determine value of each variable as a simplified radical:

1.



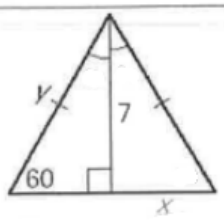
x = y =

2.



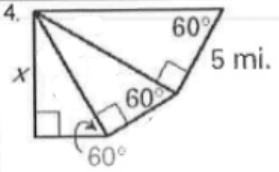
x = y =

3.



x = y =

4.



Draw a picture to represent and solve each of the following:

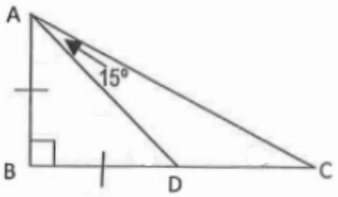
5. The altitude of an equilateral triangle is 12 centimeters. Find the perimeter of the triangle.

6. The diagonal of a square is 12 inches. Find the area.

7. The perimeter of a rectangle is 32 feet. The length is three times as long as the width. Find the length of the diagonal.

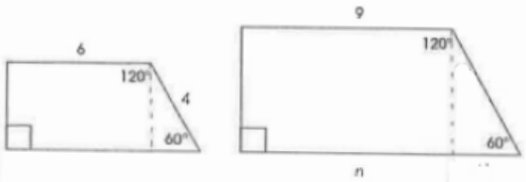
8. The legs of an isosceles triangle are $10\sqrt{3}$ cm long. The vertex angle has a measure of 120. Find the length of the base of the triangle and the length of the altitude from the vertex.

9. Find CD if AD = 16.



10. Show work.

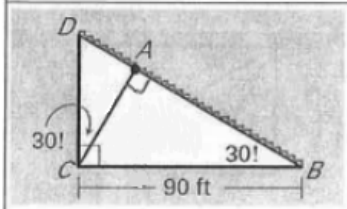
Similar trapezoids are shown.



What is the value of n?

A. 10
B. 12
C. 15
D. 19

11. A fan at a sporting event is sitting at point A in the bleachers. The bleacher seating has an angle of elevation of 30° and a base length of 90 feet.



a. Find the height CD of the bleachers.

b. Find the distance AB that the fan is sitting from the base, point B.

c. Find the height of the fan sitting at point A from the ground, $\overline{BC}$