

Special Right Triangles

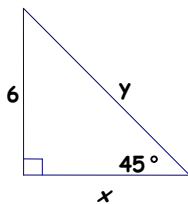
~ 1 ~

1. If the area of a square is 49 cm^2 , what is the length of the diagonal?

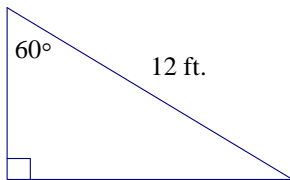
2. What is the ratio between the hypotenuse and long side in a 30° - 60° - 90° triangle?

- A. 1:2 B. 2:1
C. $2:\sqrt{3}$ D. $\sqrt{3}:2$

3. Find the value of x and y .



4. Find the area of the triangle.



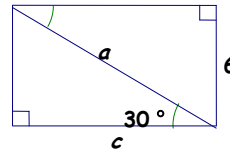
5. What is the ratio between the hypotenuse and leg in a 45° - 45° - 90° triangle?

- A. 2:1 B. $\sqrt{2}:1$
C. 1:2 D. $1:\sqrt{2}$

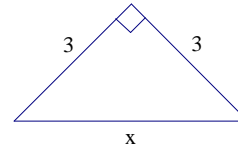
6. The diagonal of a square is $9\sqrt{2}$ in. Find the length of a side.

7. The roof of a barn is shaped like an equilateral triangle with height 10 ft. Find the length of one side of the roof.

8. Find the value of each variable.



9. Find the value of x .

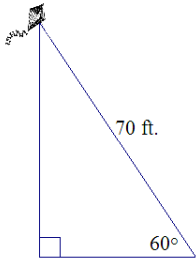


10. A man in a boat sees a lighthouse in the distance. From the boat, the man looks up at a 30° angle to the top of the 100 ft lighthouse. How far from the lighthouse is the boat?

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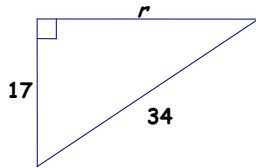
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11. A kite is on a string as shown in the figure. The string makes an angle of 60° with the ground. If the length of the string is 70 ft, what is the height of the kite above the ground, in feet?



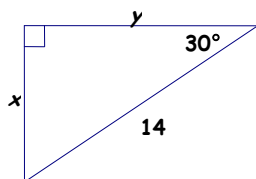
- A. $70\sqrt{3}$ ft B. $35\sqrt{3}$ ft
C. 35 ft D. 70 ft

12. Find the unknown value.

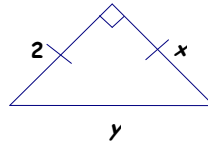


Find the value of x and y . (13-15)

13.



14.



15.

