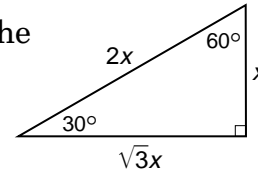
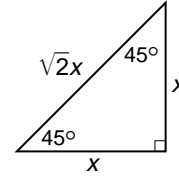


Study Guide

Special Right Triangles

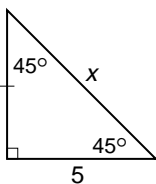
Two special kinds of right triangles are the 45° - 45° - 90° triangle and the 30° - 60° - 90° right triangle.

- In a 45° - 45° - 90° triangle, the hypotenuse is $\sqrt{2}$ times as long as a leg.
- In a 30° - 60° - 90° triangle, the hypotenuse is twice as long as the shorter leg and the longer leg is $\sqrt{3}$ times as long as the shorter leg.



Examples: Find the value of x .

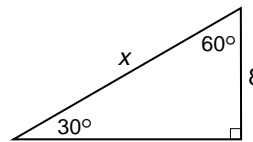
1



Since the triangle is a 45° - 45° - 90° triangle, the hypotenuse is $\sqrt{2}$ times as long as the leg.

So $x = 5\sqrt{2}$ or about 7.1.

2

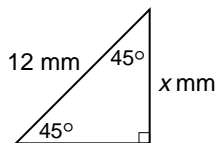


Since the triangle is a 30° - 60° - 90° triangle, the hypotenuse is twice as long as the shorter leg.

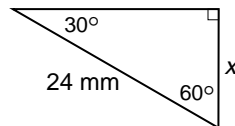
So $x = 2(8)$ or 16.

Find the value of x .

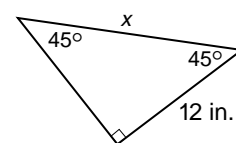
1.



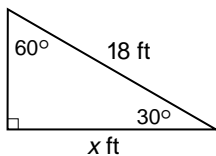
2.



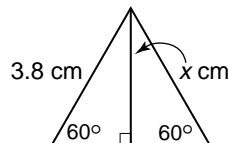
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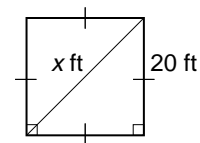
4.



5.



6.



7. Find the perimeter of the triangle shown at the right.

