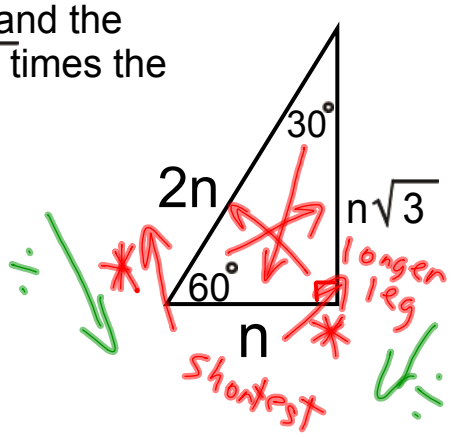
7-3 Special Right Triangles
Day 2

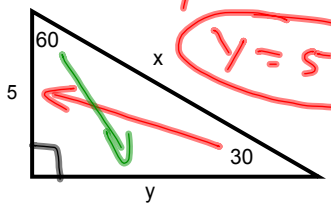
30°- 60°- 90° Triangles:

*Special right triangle

*The length of the hypotenuse is twice the length of the shorter leg, and the length of the longer leg is $\sqrt{3}$ times the length of the shorter leg.



Example 1) **Find x and y**



$y = 5 \cdot \sqrt{3}$

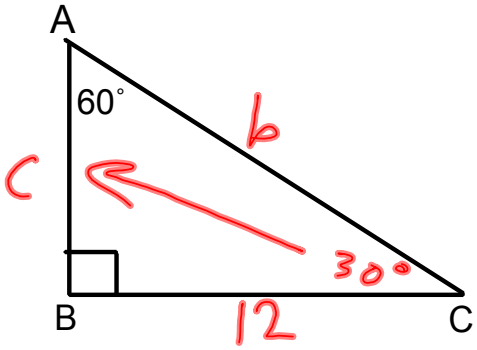
$y = 5\sqrt{3}$

$x = 5 \cdot 2$

$x = 10$

Example 2)

Find c and b, if a = 12.



$c = \frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{3}$

$c = 4\sqrt{3}$

$b = 4\sqrt{3} \cdot 2$

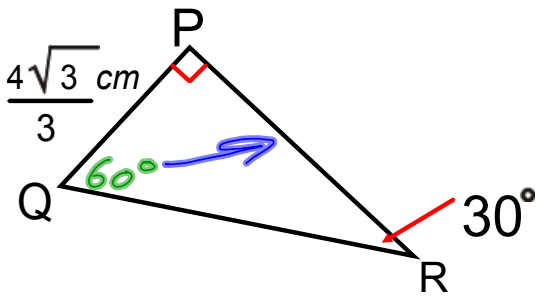
$b = 8\sqrt{3}$

Example 3:

Find QR and PR.

$QR = \frac{4\sqrt{3}}{3} \cdot 2$

$QR = \frac{8\sqrt{3}}{3}$



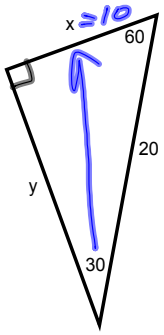
$PR = \frac{4\sqrt{3}}{3} \cdot \sqrt{3}$

$PR = \frac{4 \cdot 3}{3} = \frac{12}{3} = 4$

Example 4) Find x and y

$x = \frac{20}{2}$

$x = 10$



$y = 10 \cdot \sqrt{3}$

$y = 10\sqrt{3}$