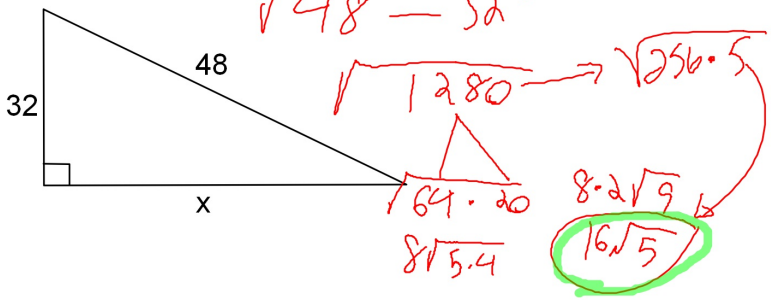
Bellwork Tuesday, March 11, 2014

1. Find the length of the missing side. Give your answer in simplified radical form.



45° - 45° - 90° Triangles

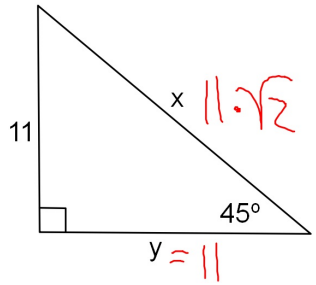
- Hypotneuse = Leg $\cdot \sqrt{2}$
- Leg = $\frac{\text{Hypotenuse}}{\sqrt{2}}$

30° - 60° - 90° Triangles

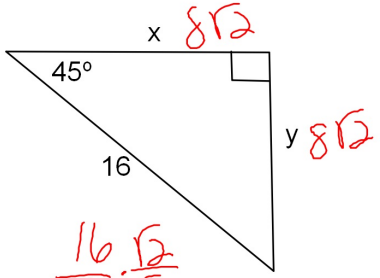
Short Leg ⟷ Hypotenuse	Short Leg ⟷ Long Leg
SL = Hypot $\div 2$	SL = LL $\div \sqrt{3}$
Hypot = SL $\times 2$	LL = SL $\times \sqrt{3}$

Use the relationships in special right triangles to find the missing sides in each problem. Give your answers in simplified radical form and make sure there are no radicals in the denominator.

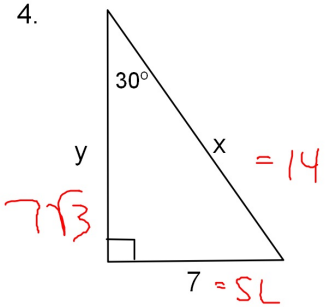
2.



3.



4.



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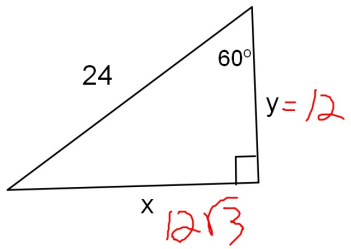

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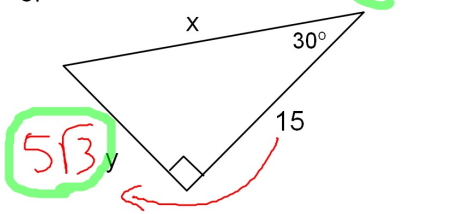


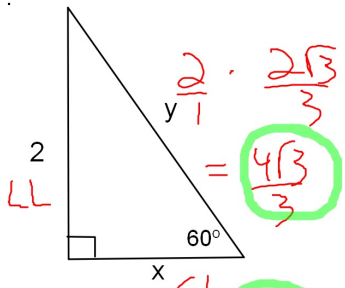
$2 \cdot 5\sqrt{3} = 10\sqrt{3}$

$5\sqrt{3}$

$\frac{15}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$= \frac{15\sqrt{3}}{3}$

7.



$\frac{2}{1} \cdot \frac{2\sqrt{3}}{3}$

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

LL

SL

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