8-4 Special Right Triangles *(continued)*

std. 20.0

Feb 3

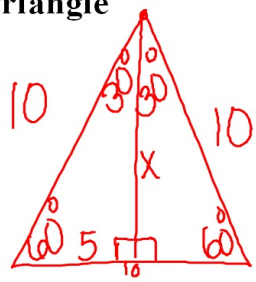
Examples:

1 **The perimeter of an equilateral triangle is 30. Find the altitude.**

short · $\sqrt{3}$

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

$x = 5\sqrt{3}$



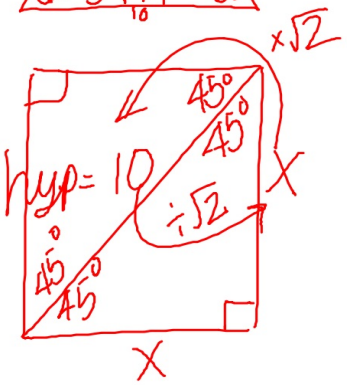
2 **The diagonal of a square is 10. How long is a side?**

$5\sqrt{2}$

leg

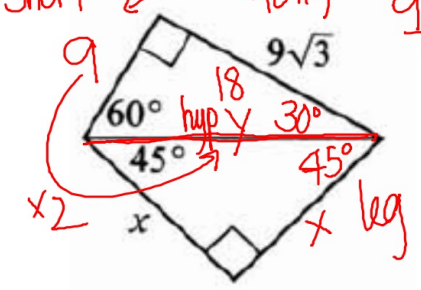
$\frac{x \cdot \sqrt{2}}{\sqrt{2}} = \frac{10}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$\frac{10\sqrt{2}}{2}$



3 ÷√3

short ← long

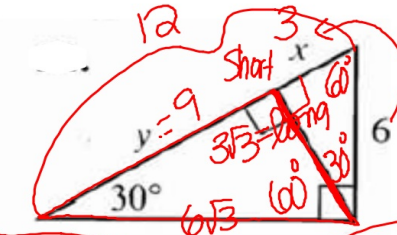


$\frac{9\sqrt{3}}{\sqrt{3}}$

$x = \frac{18}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} \quad \frac{18\sqrt{2}}{2}$

$x = 9\sqrt{2}$

4



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

$3\sqrt{9}$

$3 \cdot 3$

9