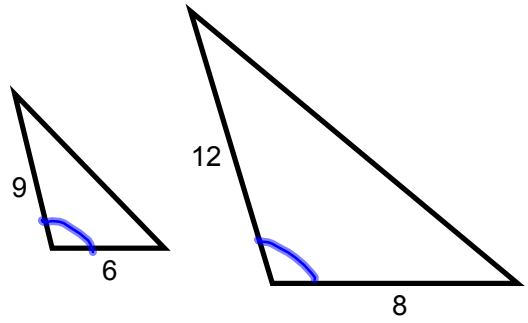
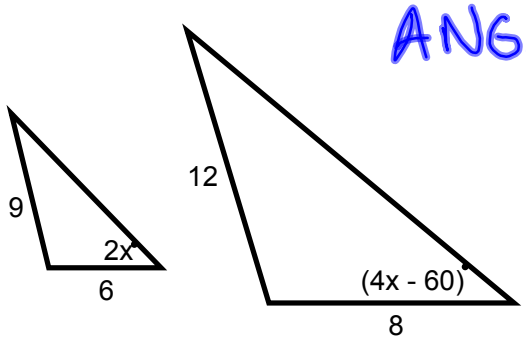
Do-now: What is the similarity ratio of the two similar figures below? What is the ratio of their angle measures?



$\frac{9}{12}$ $\frac{6}{8}$ $\frac{3}{4}$ Similarity ratio

The ratio of the corresponding angles in two similar figures is always 1:1!

ANGLES ARE ≅!



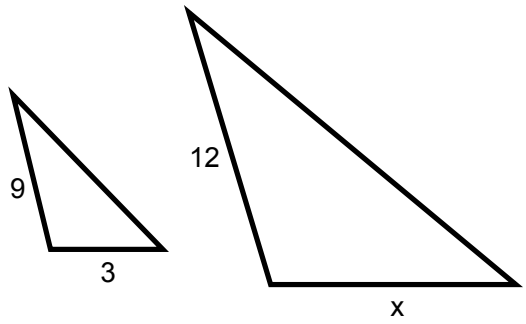
$2x = 4x - 60$

$-4x \quad -4x$

$\frac{-2x}{-2} = \frac{-60}{-2}$

$x = 30$

The two triangles below are similar. What is the value of x?

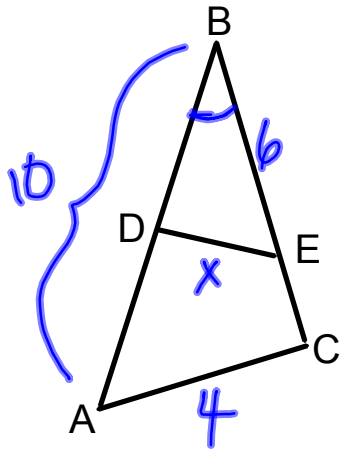


$$\frac{9}{12} = \frac{3}{x}$$

$$36 = 9x$$

$$4 = x$$

In the diagram below, $\triangle ABC \sim \triangle EBD$. If AB = 10, AC = 4, and EB = 6, what is the length of ED?



$$\frac{AB}{EB} = \frac{BC}{BD} = \frac{AC}{ED}$$

$$\frac{10}{6} = \frac{}{} = \frac{4}{x}$$

$$\frac{10}{6} = \frac{4}{x} \qquad 24 = 10x$$

$$2.4 = x$$

The two triangles below are similar. What is the length of x?

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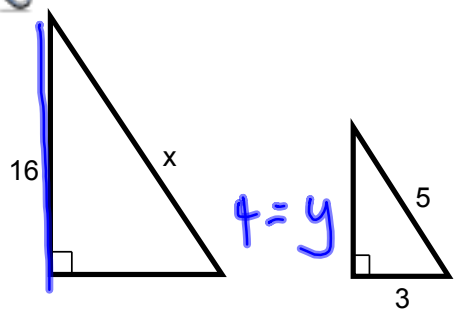

$4 = y$

$3^2 + y^2 = 5^2$

$9 + y^2 = 25$

$y^2 = 16$

$y = 4$

$\frac{16}{4} = \frac{x}{5}$

$\frac{5}{x} = \frac{4}{16}$

$\frac{16}{x} = \frac{4}{5}$

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