Name _____ Date _____

Corresponding Angles of Similar of Triangles- Guided Lesson Explanation

Explanation#1

Step 1) We should know what we have to be find out.

"What's the missing length?"

Step 2) The original diagram included a smaller triangle inside a larger triangle. So ΔEFG ~ ΔEIJ means that ΔEFG is similar to ΔEIJ. And the sides of similar triangles are proportional.

So, $\frac{EF}{EI} = \frac{FG}{IJ}$

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

$$\frac{5}{10} = \frac{4}{x}$$

$x = \frac{10 \times 4}{5}$

$x = \frac{40}{5}$

x = 8

Step 3) So the missing length is 8 meters.

Explanation # 2

Step 1) We should know what we have to be find out.

"Find the missing length."

Step 2) ΔPQR ~ ΔSTU means that ΔPQR is similar to ΔSTU. And the sides of similar triangles are proportional.

So, $\frac{PR}{TU} = \frac{QR}{SU}$

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$$\frac{11}{3} = \frac{6}{h}$$

$h = \frac{3 \times 6}{11}$

$h = \frac{18}{11}$

h = 1.6

Step 3) So the missing length is 1.6centimeters.

Explanation # 3

Step 1) We should know what we have to be find out.

"What is the missing length?"

Step 2) ΔUVW ~ ΔXYZ means that ΔUVW is similar to ΔXYZ. And the sides of similar triangles are proportional.

So, $\frac{UV}{XY} = \frac{VW}{YZ}$

$$\frac{8}{16} = \frac{10}{h}$$

$h = \frac{16 \times 10}{8}$

$h = \frac{160}{8}$

h = 20

Step 3) So the missing length is 20 meters.