

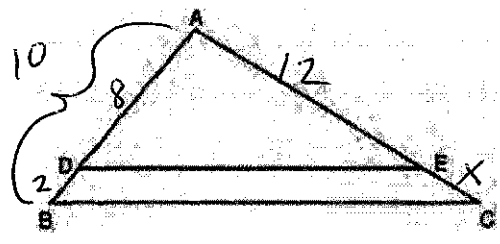
Name Key Shultis

Similar Triangles Test REVIEW

1 Given $\triangle ABC \sim \triangle DEF$ such that $\frac{AB}{DE} = \frac{3}{2}$. Which statement is not true?

- 1 $\frac{BC}{EF} = \frac{3}{2}$
- 2 $\frac{m\angle A}{m\angle D} = \frac{3}{2}$ * angles are equal
- 3 $\frac{\text{area of } \triangle ABC}{\text{area of } \triangle DEF} = \frac{9}{4}$ ← area is squared
- 4 $\frac{\text{perimeter of } \triangle ABC}{\text{perimeter of } \triangle DEF} = \frac{3}{2}$

2 In the diagram of $\triangle ABC$ shown below, $\overline{DE} \parallel \overline{BC}$.



If $AB = 10$, $AD = 8$, and $AE = 12$, what is the length of EC ?

- 1 6
- 2 2
- 3 3
- 4 15

$$\frac{8}{10} = \frac{12}{12+x}$$

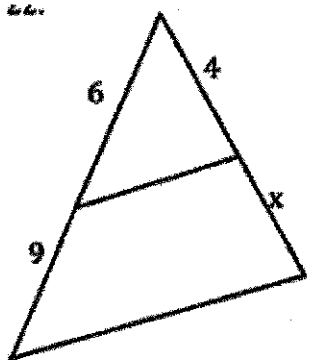
$$120 = 96 + 8x$$

$$\frac{24}{8} = \frac{8x}{8}$$

$$x = 3$$

Solve for x.

3



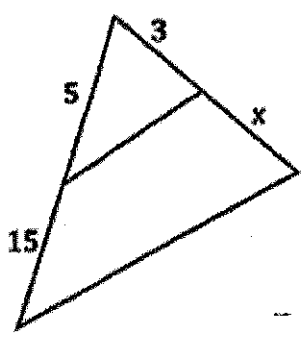
$$\frac{6}{15} = \frac{4}{4+x}$$

$$60 = 24 + 6x$$

$$\frac{36}{6} = \frac{6x}{6}$$

$$x = 6$$

4



$$\frac{5}{15} = \frac{3}{3+x}$$

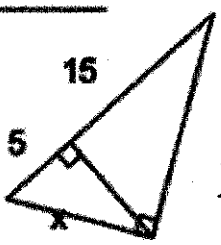
$$45 = 15 + 5x$$

$$\frac{30}{5} = \frac{5x}{5}$$

$$6 = x$$

5

$$x = 10$$



$$\frac{H}{L} = \frac{L}{S}$$

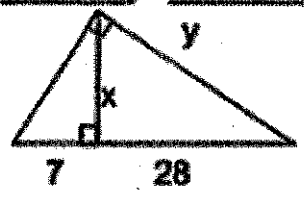
$$\frac{20}{x} = \frac{x}{5}$$

$$\sqrt{100} = \sqrt{x^2}$$

$$10 = x$$

6

$$x = 14 \quad y = 31.3$$



(X)

$$\frac{S_1}{a} = \frac{a}{S_2}$$

$$\frac{7}{x} = \frac{x}{28}$$

$$196 = x^2$$

$$x = 14$$

(Y)

$$\frac{H}{L} = \frac{L}{S} \quad y = 31.3$$

$$\frac{35}{y} = \frac{y}{28}$$

$$\sqrt{980} = \sqrt{y^2}$$