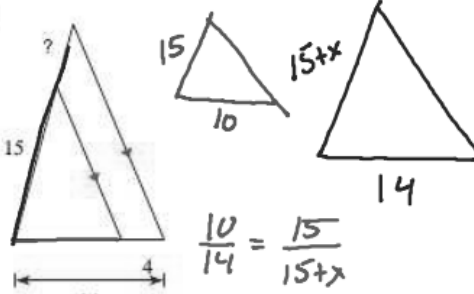


Proportional Parts in Triangles and Parallel Lines

Find the missing length indicated.

1) 

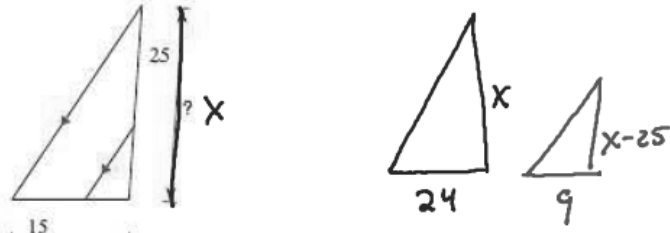
$$\frac{10}{14} = \frac{15}{15+x}$$

$$10(15+x) = 210$$

$$150 + 10x = 210$$

$$10x = 60$$

$$x = 6$$

2) 

$$\frac{24}{9} = \frac{x}{x-25}$$

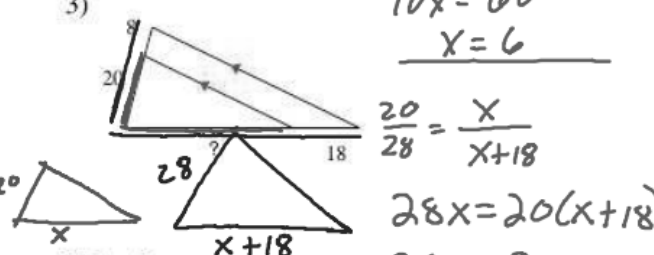
$$9x = 24(x-25)$$

$$9x = 24x - 600$$

$$-24x - 24x = -600$$

$$-15x = -600$$

$$x = 40$$

3) 

$$\frac{20}{28} = \frac{x}{x+18}$$

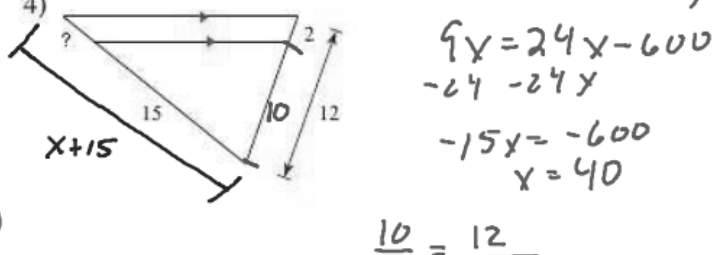
$$28x = 20(x+18)$$

$$28x = 20x + 360$$

$$8x = 360$$

$$x = 45$$

Solve for x.

4) 

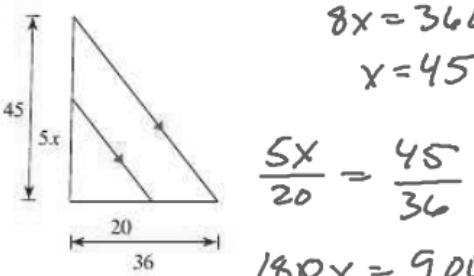
$$\frac{10}{15} = \frac{12}{x+15}$$

$$10(x+15) = 180$$

$$10x + 150 = 180$$

$$10x = 30$$

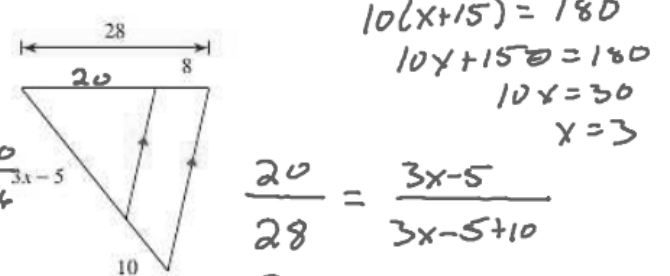
$$x = 3$$

5) 

$$\frac{5x}{20} = \frac{45}{36}$$

$$180x = 900$$

$$x = 5$$

6) 

$$\frac{20}{28} = \frac{3x-5}{3x-5+10}$$

$$\frac{20}{28} = \frac{3x-5}{3x+5}$$

$$20(3x+5) = 28(3x-5)$$

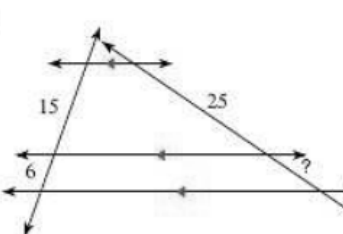
$$60x + 100 = 84x - 140$$

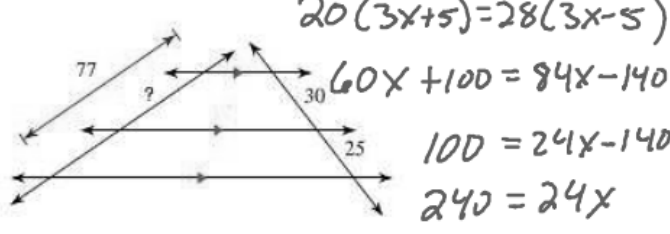
$$100 = 24x - 140$$

$$240 = 24x$$

$$x = 10$$

Find the missing length indicated.

7) 

8) 

$$20(3x+5) = 28(3x-5)$$

$$60x + 100 = 84x - 140$$

$$100 = 24x - 140$$

$$240 = 24x$$

$$x = 10$$