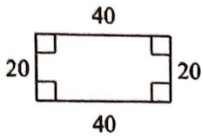


Intro to Similarity, Day 2

State if the polygons are similar. → Congruent angles and proportional sides

1)

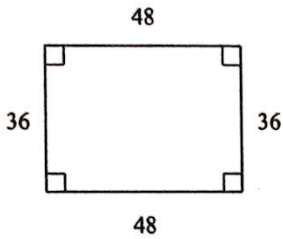


$$\frac{40}{48} \stackrel{?}{=} \frac{20}{36}$$

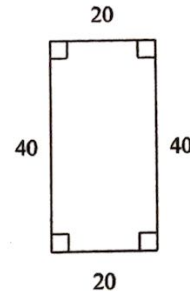
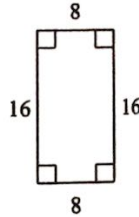
$$40(36) \stackrel{?}{=} 48(20)$$

$$1440 \neq 960$$

Not proportional
So not similar



2)



$$\frac{8}{20} \stackrel{?}{=} \frac{16}{40}$$

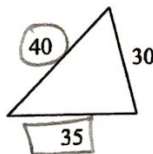
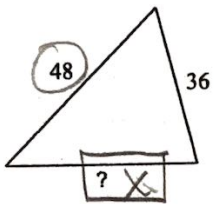
$$8(40) \stackrel{?}{=} 16(20)$$

$$320 = 320 \checkmark$$

Sides are proportional
and angles are congruent
So yes, similar.

The polygons in each pair are similar. Find the missing side length.

3)



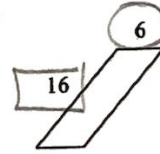
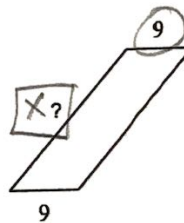
$$\frac{48}{40} = \frac{X}{35}$$

$$48(35) = 40X$$

$$1680 = 40X$$

$$42 = X$$

4)



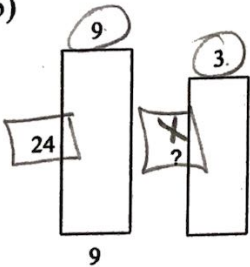
$$\frac{9}{6} = \frac{X}{16}$$

$$9(16) = 6X$$

$$144 = 6X$$

$$24 = X$$

5)



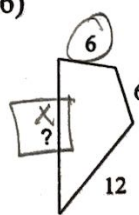
$$\frac{9}{3} = \frac{24}{X}$$

$$9X = 3(24)$$

$$9X = 72$$

$$X = 8$$

6)



$$\frac{6}{9} = \frac{X}{24}$$

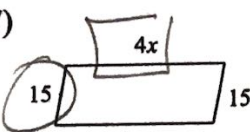
$$9X = 6(24)$$

$$9X = 144$$

$$X = 16$$

Solve for x. The polygons in each pair are similar.

7)

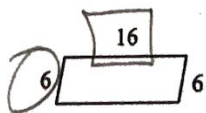


$$\frac{15}{6} = \frac{4x}{16}$$

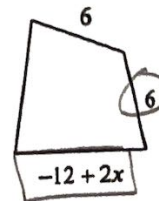
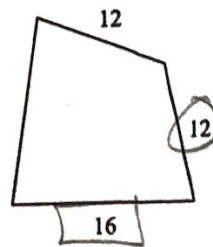
$$15(16) = 4x(6)$$

$$240 = 24x$$

$$10 = x$$



8)



$$\frac{12}{6} = \frac{16}{-12x + 2x}$$

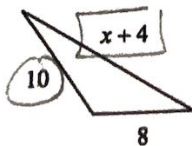
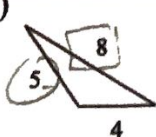
$$12(-12 + 2x) = 6(16)$$

$$-144 + 24x = 96$$

$$24x = 240$$

$$x = 10$$

9)



$$\frac{5}{10} = \frac{8}{x+4}$$

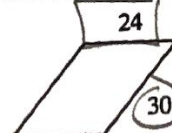
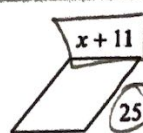
$$5(x+4) = 80$$

$$5x + 20 = 80$$

$$5x = 60$$

$$x = 12$$

10)



$$\frac{x+11}{24} = \frac{25}{30}$$

$$30(x+11) = 24(25)$$

$$30x + 330 = 600$$

$$30x = 270$$

$$x = 9$$