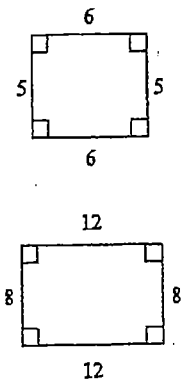
AW 10

Name KEY

Assignment 6.1

State if the polygons are similar.

1)

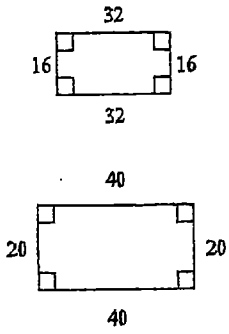


$\frac{5}{8} = 0.625$

$\frac{6}{12} = 0.500$

NO!

2)



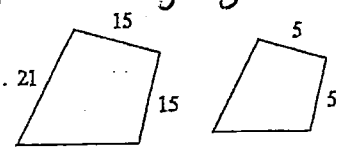
$\frac{32}{40} = 0.800$

$\frac{16}{20} = 0.800$

YES!

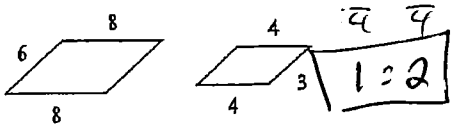
The polygons in each pair are similar. Find the scale factor of the smaller figure to the larger figure.

3)



$\frac{5}{5} : \frac{15}{5} \rightarrow 1:3$

4)



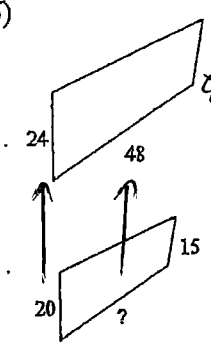
$4:8$

$\frac{4}{4} : \frac{8}{4}$

$1:2$

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

5)

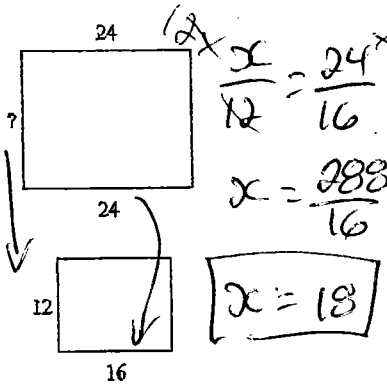


$\frac{x}{48} = \frac{20}{24}$

$x = \frac{960}{24}$

$x = 40$

6)



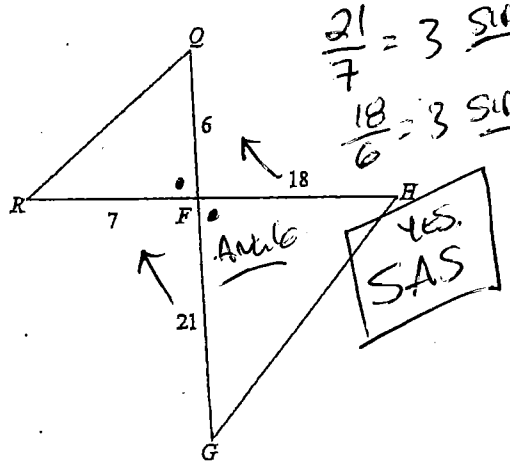
$\frac{x}{12} = \frac{24}{16}$

$x = \frac{288}{16}$

$x = 18$

State if the triangles in each pair are similar. If so, state how you know they are similar.

7)



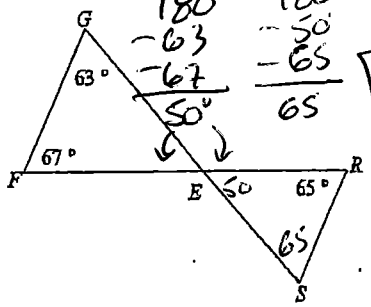
$\frac{21}{7} = 3$ SIDE

$\frac{18}{6} = 3$ SIDE

ANGLE

YES. SAS

8)



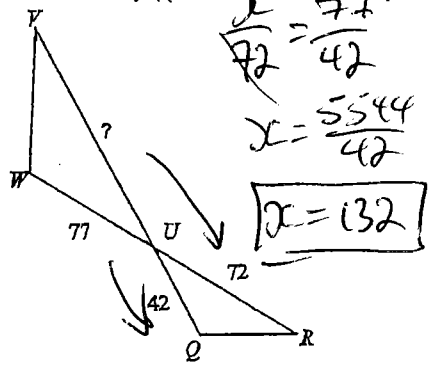
$180 - 63 - 67 = 50°$

$180 - 50 - 65 = 65$

NO

Find the missing length. The triangles in each pair are similar.

9)

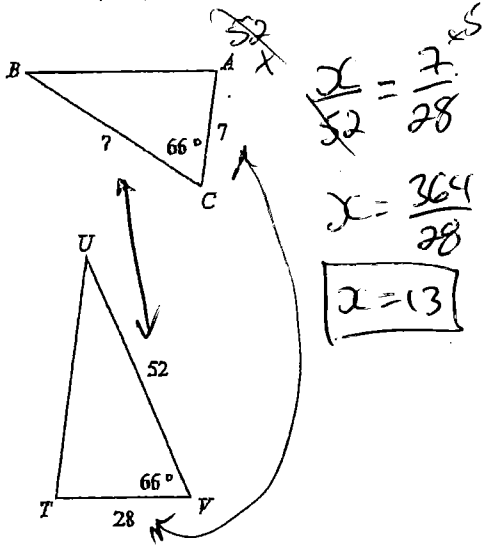


$\frac{x}{72} = \frac{77}{42}$ ×72

$x = \frac{5544}{42}$

$x = 132$

10)



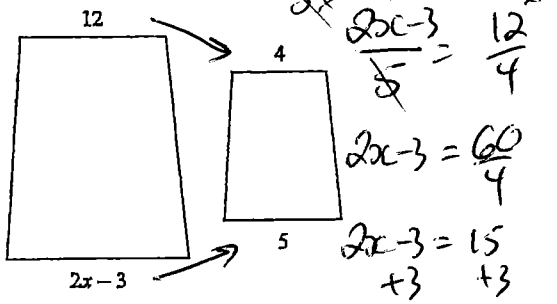
$\frac{x}{52} = \frac{7}{28}$ ×52

$x = \frac{364}{28}$

$x = 13$

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

11)



$\frac{2x-3}{5} = \frac{12}{4}$ ×5

$2x - 3 = \frac{60}{4}$

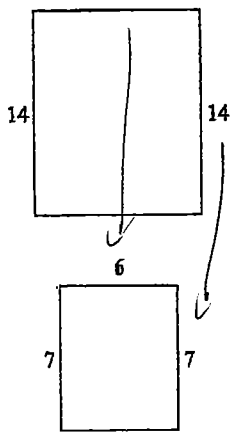
$2x - 3 = 15$

$+3 \quad +3$

$\frac{2x}{2} = \frac{18}{2}$

$x = 9$

12)



$\frac{3x-6}{6} = \frac{14}{7}$ ×6

$3x - 6 = \frac{84}{7}$

$3x - 6 = 12$

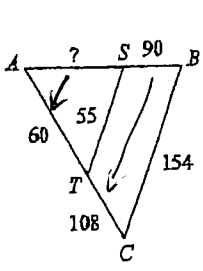
$+6 \quad +6$

$\frac{3x}{3} = \frac{18}{3}$

$x = 6$

Find the missing length. The triangles in each pair are similar.

13)

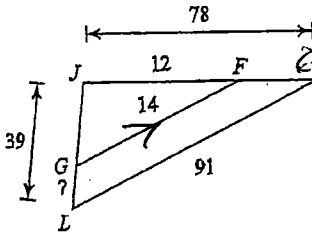


$\frac{x}{60} = \frac{90}{108}$ ×60

$x = \frac{5400}{108}$

$x = 50$

14)



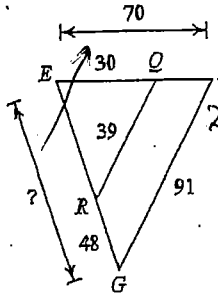
$\frac{x}{78-12} = \frac{39}{78}$

$\frac{x}{66} = \frac{39}{78}$ ×66

$x = \frac{2574}{78}$

$x = 33$

15)



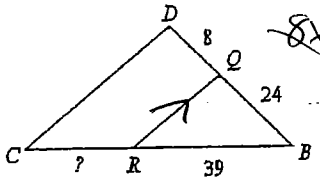
$\frac{x}{70} = \frac{48}{70-30}$

$\frac{x}{70} = \frac{48}{40}$ ×70

$x = \frac{3360}{40}$

$x = 84$

16)

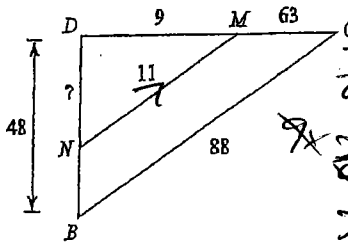


$\frac{x}{8} = \frac{39}{24}$ ×8

$x = \frac{312}{24}$

$x = 13$

17)



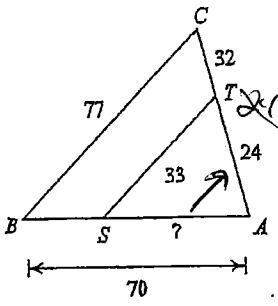
$\frac{x}{9} = \frac{48}{9+63}$

$\frac{x}{9} = \frac{48}{72}$ ×9

$x = \frac{432}{72}$

$x = 6$

18)



$\frac{x}{24} = \frac{70}{32+24}$

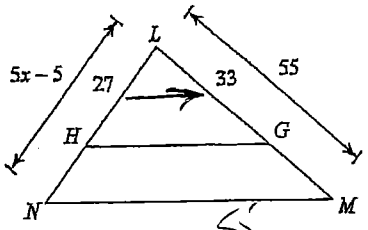
$\frac{x}{24} = \frac{70}{56}$ ×24

$x = \frac{1680}{56}$

$x = 30$

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

19)



$\frac{5x-5}{55} = \frac{27}{33}$ ×55

$5x - 5 = \frac{1485}{33}$

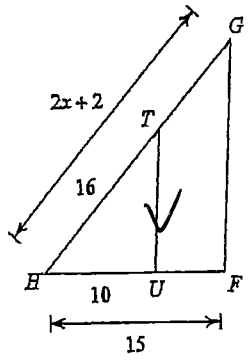
$5x - 5 = 45$

$+5 \quad +5$

$\frac{5x}{5} = \frac{50}{5}$

$x = 10$

20)



$\frac{2x+2}{15} = \frac{16}{10}$ ×15

$2x + 2 = \frac{240}{10}$

$2x + 2 = 24$

$-2 \quad -2$

$\frac{2x}{2} = \frac{22}{2}$

$x = 11$