Completion /45

Secondary Math 2

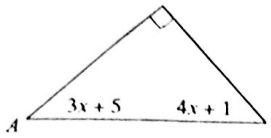
Name Key

Unit 10 Similar Triangles Review

Date _____ Period ____

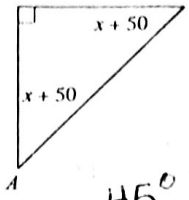
Find the measure of angle A.

1)



41°

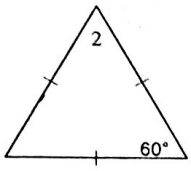
2)



45°

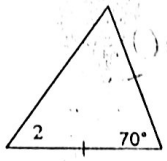
Find the value of *x*.

3) $m\angle 2 = x + 70$



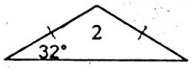
x = -10

4) $m\angle 2 = x + 65$



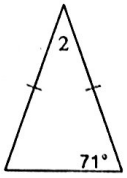
x = -10

5) $m\angle 2 = 17x - 3$



x = 7

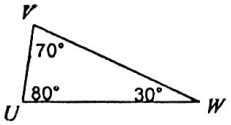
6) $m\angle 2 = x + 47$



x = -9

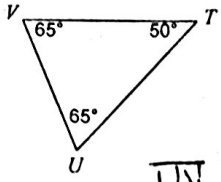
Order the sides of each triangle from shortest to longest.

7)



$\overline{UV}$, $\overline{UW}$, $\overline{VW}$

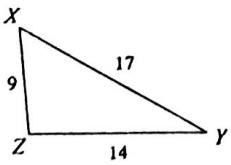
8)



$\overline{UV}$, $\overline{TV} \cong \overline{TU}$

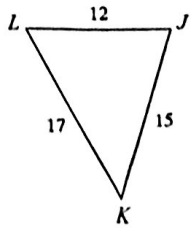
Order the angles in each triangle from smallest to largest.

9)



∠Y, ∠X, ∠Z

10)



∠K, ∠L, ∠J

State if the three numbers can be the measures of the sides of a triangle. State how you know.

11) 6, 3, 11

No, $6+3<11$

12) 11, 3, 12

Yes, $11+3>12$

13) 14, 9, 6

Yes, $9+6>14$

14) 9, 15, 9

Yes, $9+9>18$

Dilate each figure using the stated scale factor.

15) A(7,3) B(-2,5) C(3,-4), k=3

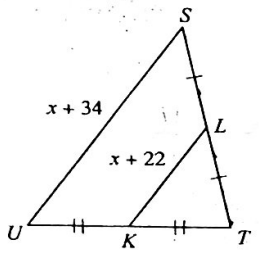
A'(21,9), B'(-6,15), C'(9,-12)

16) J(0,4) K(-8,3) L(-4,6), k=0.5

J'(0,2), K'(-4,1.5), L'(-2,3)

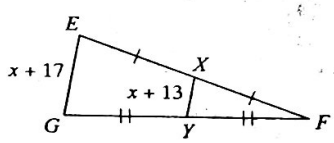
Solve for *x*.

17)



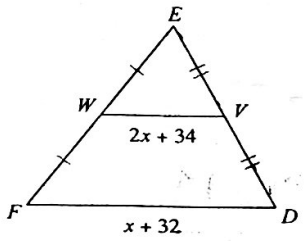
$x=-10$

18)



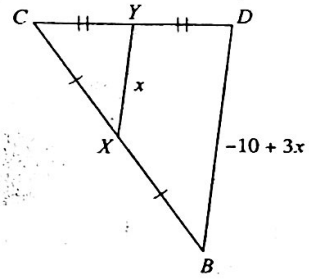
$x=-9$

19)



$x=-12$

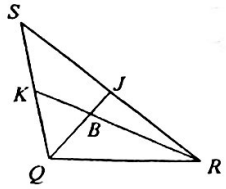
20)



$x=10$

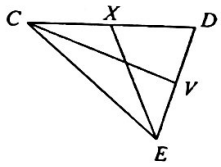
Each figure shows a triangle with one or more of its medians.

21) Find x if $RS = 3x - 1$ and $JS = 2 + x$



$x=5$

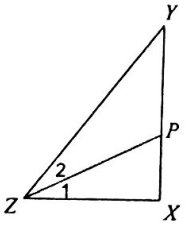
22) Find x if $XC = \frac{x-1}{2}$ and $XD = x - \frac{5}{2}$



$x=4$

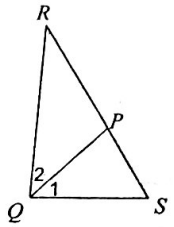
Each figure shows a triangle with one of its angle bisectors.

23) $m\angle 2 = 6x + 2$ and $m\angle 1 = 7x - 2$.
Find x.



x=4

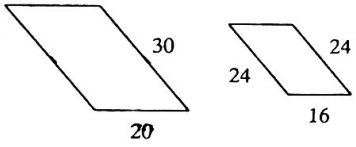
24) $m\angle 2 = 8x - 5$ and $m\angle 1 = 7 + 6x$.
Find x.



x=6

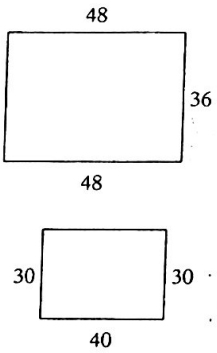
The polygons in each pair are similar. Find the scale factor of the first figure to the second figure. State if it is an enlargement or a reduction.

25)



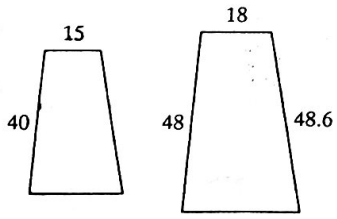
Reduction
k= .8

26)



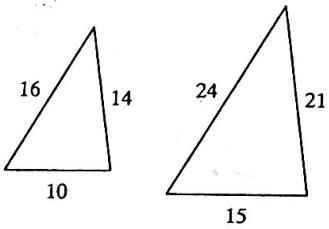
Reduction
k = .83

27)



Enlagement
k= 1.2

28)



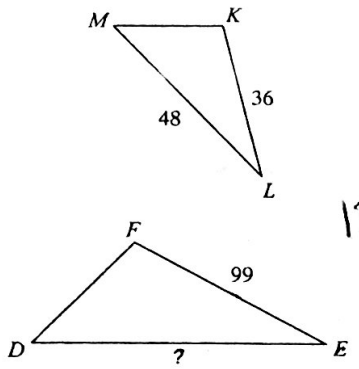
Enlargement
k= 1.5

29) You are 163cm tall. You cast a shadow that is 100cm long. How tall is the building next to you that casts a 640cm shadow?

1,043.2 cm

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

30) $\triangle FED \sim \triangle KLM$



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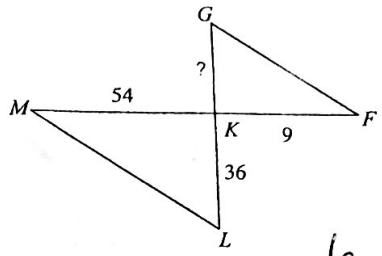
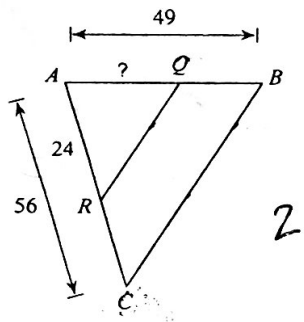
31) $\triangle KLM \sim \triangle KGF$



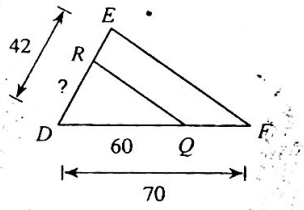
6

32)



21

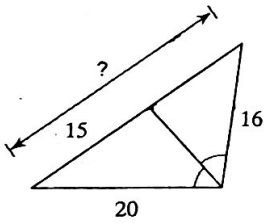
33)



36

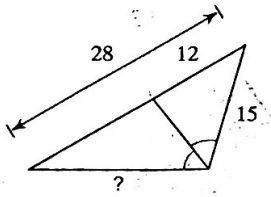
Find the missing length indicated.

34)



27

35)



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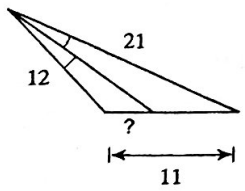
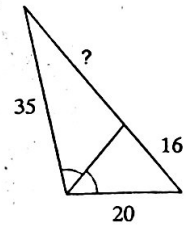
36)



4

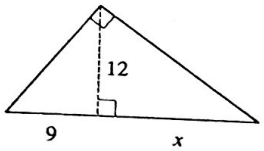
37)



28

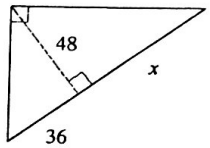
Find the missing length indicated. Leave your answer in simplest radical form.

38)



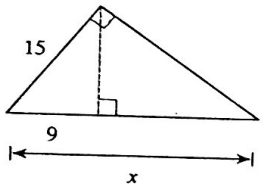
$x = 16$

39)



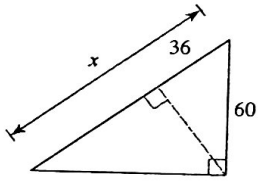
$x = 64$

40)



$x = 25$

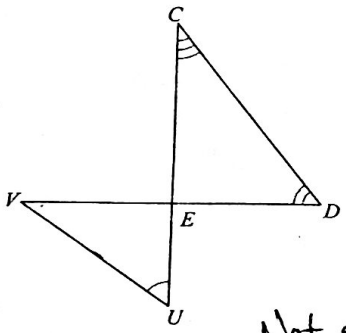
41)



$x = 100$

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

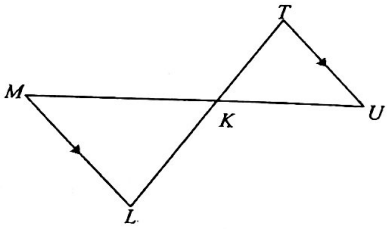
42)



Not similar

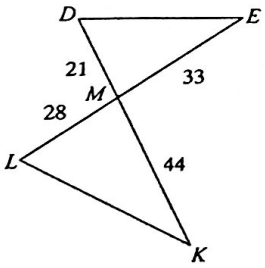
$\triangle EDC \sim$ _____

43)



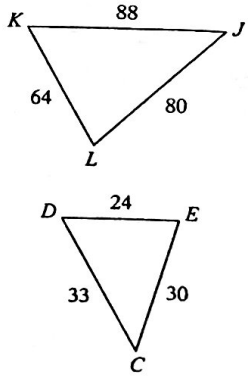
$\triangle KLM \sim \underline{\triangle KTU}$ by AA

44)



$\triangle MLK \sim \underline{\triangle MDE}$ by SAS

45)



$\triangle JKL \sim \underline{\triangle CDE}$ by SSS