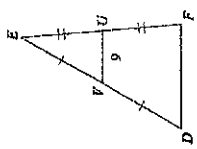


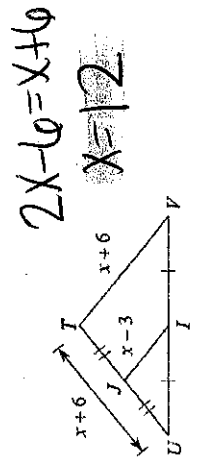
Name Key

Geometry Unit 3 Test Review 2

1. Find DF



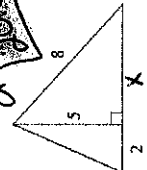
2. Find X.



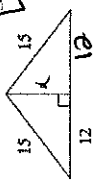
7. Find the AREA of the triangles.



8.

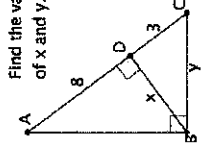


9.

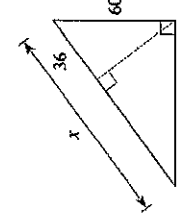


3. Find the values of x and y.

Find the values of x and y.



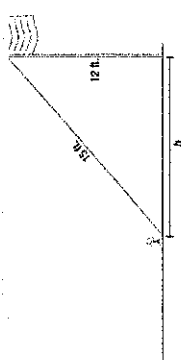
$H = x$ $H = 60$
 $S = 60$ $S = 36$
 $L = 60$ $L = 36$



$36x = 3600$
 $x = 100$

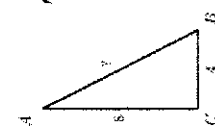
$H = 11$ $H = y$ $H = x$
 $S = 4$ $S = 3$ $S = x$
 $L = 3$ $L = x$ $L = 8$
 $\frac{3}{x} = \frac{x}{8}$
 $x^2 = 24$
 $x = 4.9$

5. Find b.



$b^2 + 12b = 15b$
 $b^2 + 144 = 225$
 $b^2 = 81$
 $b = 9$

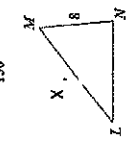
6. In the right triangle above, AC = 8 and BC = 1. What is AB?



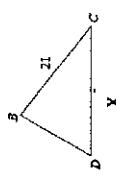
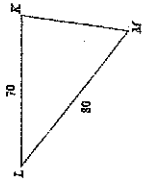
$4^2 + 8^2 = x^2$
 $80 = x^2$
 $8.9 = x$

10

$130 = \frac{80}{x}$
 $80x = 1040$

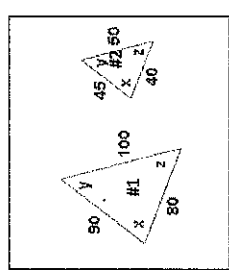


11.



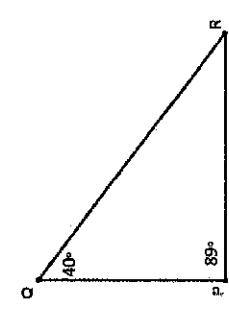
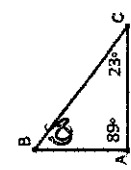
$\frac{70}{21} = \frac{80}{x}$
 $70x = 1680$
 $x = 24$

12. Find the similarity ratio of $\Delta\#1$ to $\Delta\#2$



$\frac{90}{45} = \frac{80}{40}$

13. Are these triangles similar? Why or why not?



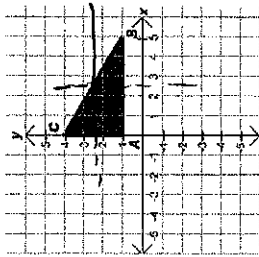
$\frac{89}{119} \neq \frac{23}{89}$
 no

TR-2

14. (G.C.3 - 3.3) Fill in the blanks with the following vocabulary terms: orthocenter, incenter, centroid, circumcenter

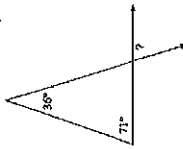
- A. The medians of a triangle are concurrent at the centroid
- B. The angle bisectors of a triangle are concurrent at the incenter
- C. The perpendicular bisectors of a triangle are concurrent at the circumcenter
- D. The altitudes of a triangle are concurrent at the orthocenter

15. (G.C.3 - 5.3) Find the center of the circle that you can circumscribe about the triangle (Find the circumcenter!)



(2, 2)

16. (G.CO.10 - 3.3) Find the measure of the missing angle:



$$\begin{array}{r} 71 \\ + 36 \\ \hline 107 \end{array}$$

$$\begin{array}{r} 180 \\ - 107 \\ \hline 73 \end{array}$$

17. (G.CO.10 - 3.3) Solve for x:



$$90 + 60 + 3x + 3 = 180$$

$$3x + 153 = 180$$

$$\begin{array}{r} 3x + 153 = 180 \\ -153 \quad -153 \\ \hline 3x = 27 \end{array}$$

$$x = 9$$

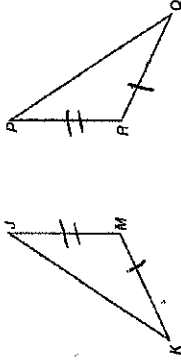
18. (G.CO.7)

When triangles are congruent, their sides AND angles are congruent. Which 3 transformations use rigid motions to produce congruent triangles?

- translation
- reflection
- rotation

When triangles are similar, angles are congruent and sides are proportional. Which transformation produces similar triangles? dilation

19. (G.CO.8)



ΔJKM was reflected to produce ΔPQR . Decide if each statement would model SSS, SAS, ASA, AAS, or not possible.

- A. The triangles are congruent because \overline{JKM} is taken to \overline{QPR} , \overline{JM} is taken to \overline{PR} . not poss
- B. The triangles are congruent because \overline{JKM} is taken to \overline{QPR} , \overline{JM} is taken to \overline{PR} and $\angle M$ is taken to $\angle R$. SAS
- C. The triangles are congruent because \overline{JKM} is taken to \overline{QPR} , \overline{JM} is taken to \overline{PR} , and \overline{KJ} is taken to \overline{QP} . SSS
- D. The triangles are congruent because \overline{JKM} is taken to \overline{QPR} , \overline{JM} is taken to \overline{PR} and $\angle J$ is taken to $\angle P$. not poss

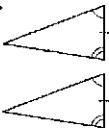
20. A student has to perform two transformations on a triangle to try and produce a congruent triangle.

- A. Rotate 180° and then reflect over y-axis. Are the triangles congruent? Why? yes
- B. Dilate by a scale factor of $\frac{1}{2}$ and then translate 3 left. Are the triangles congruent? Why? no

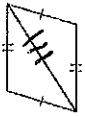
no
are smaller

21. (G.SRT.5) State SSS, SAS, ASA, AAS, HL, or not possible

A. **RSA**

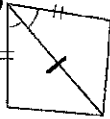


B. **SSS**



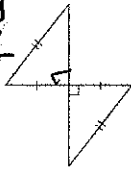
C.

SAS

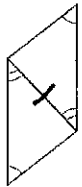


D.

HL

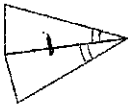


E. **AAS**



F.

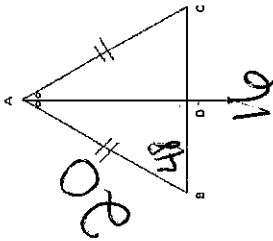
Not possible



22. (G.CO.10-4.5) $\overline{AB} = 20$, $\overline{BC} = 16$, $m\angle B = 48^\circ$

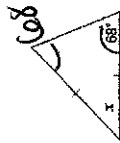
$m\angle C = 110^\circ$, $m\angle BAD = 90^\circ$, $m\angle CAD = 90^\circ$, $m\angle BAC = 90^\circ$, $m\angle BDA = 90^\circ$

$\overline{AC} = 20$, $\overline{DC} = 8$, $\overline{AC} = 8$



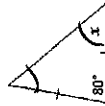
(G.CO.10-4.5) Find the missing angle:

23.



$$\frac{608}{136} = \frac{180}{x} \Rightarrow x = 50$$

24.



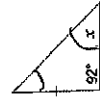
$$\frac{100}{100} = \frac{180}{x} \Rightarrow x = 70$$

25.



$$\frac{108}{108} = \frac{180}{x} \Rightarrow x = 70$$

26.



$$\frac{88}{88} = \frac{180}{x} \Rightarrow x = 44$$