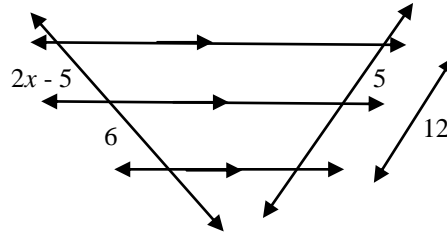


Review Packet
Unit 3 Review #2

Name _____
 Period _____ Date _____

1. $\frac{8}{20} = 2 : x$

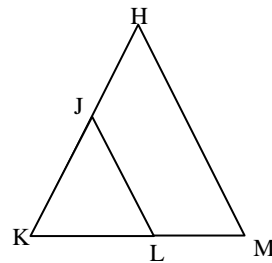
2. Find the value of x .



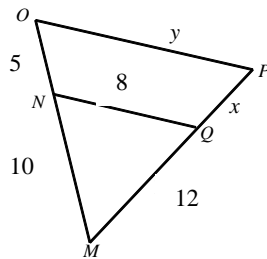
3. Use the figure to complete the statements:

$\angle H \cong \underline{\hspace{1cm}}$

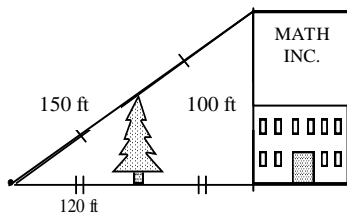
$\frac{HK}{JK} = \frac{HM}{\underline{\hspace{1cm}}}$



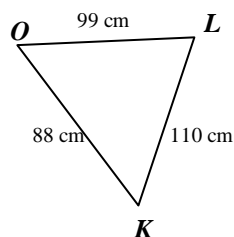
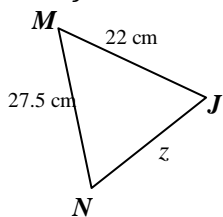
4. Use the figure to determine the value of x and y .



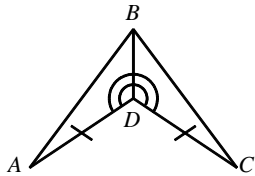
5. Use the information in the diagram to determine the height of the tree.



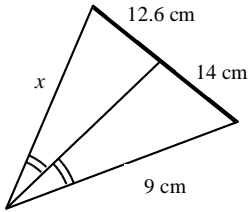
6. $\triangle MJN \sim \triangle KOL$. Find the value of the z and the similarity ratio.



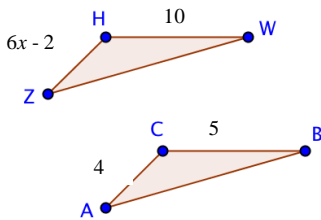
7. Write a similarity statement and the theorem/postulate that supports your statement.



8. Find x to the nearest tenth.



9. $\triangle ZHW \sim \triangle ACB$. Determine the scale factor, then solve for x and ZH

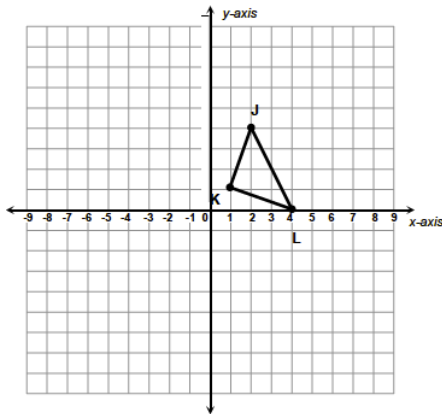


10. What types of triangles are always similar? Justify your answer.

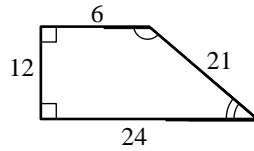
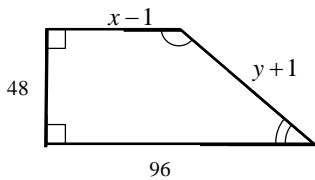
11. Fitz, who is 6 ft 9 in tall, measured his shadow to be 10 feet 1.5 inches long on a sunny afternoon. He then measured the shadow cast by the stadium lights on a football field to be 168 feet. How tall are the stadium lights?

12. James wants to draw a map of his neighborhood. If his scale drawing is 1 in to 300 m and his neighborhood is 3375 m long. Can James fit his scale drawing on an 11 inch piece of paper? Justify your reasoning.

13. Graph the image of the triangle after a dilation with scale factor $\frac{5}{2}$.



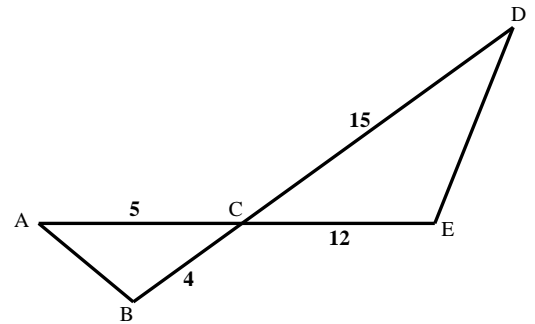
14. The polygons below are similar, but not necessarily drawn to scale. Find the values of x and y .



15. Given: The figure to the right

Prove: $\triangle ABC \sim \triangle DEC$

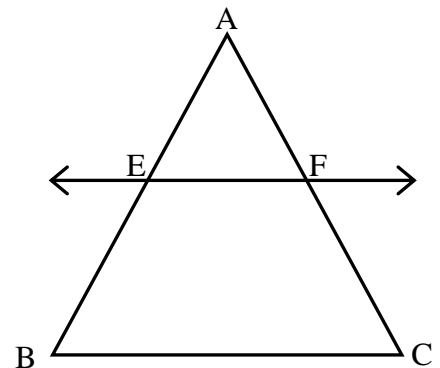
Statements	Reasons



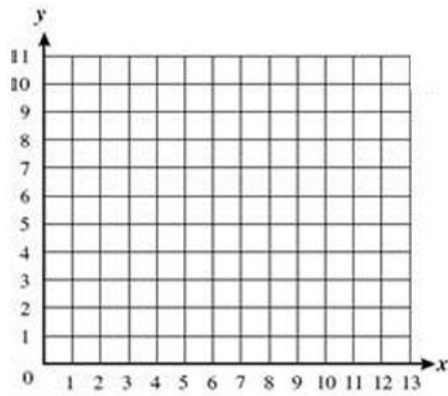
16. Given: $\overline{EF} \parallel \overline{BC}$

Prove: $(AE) \cdot (AC) = (AF) \cdot (AB)$

Statements	Reasons



17. Given: $\triangle ABC \sim \triangle AEF$. Dilate $\triangle ABC$ by a scale factor of 2 to produce $\triangle AEF$ in the coordinate plane below.



18. Tammy is 5 feet tall and she casts a 2 foot long shadow at a certain time of day. Her truck casts a shadow of 4 feet at the same time. Tammy notices that the shadows create similar triangles. She wants to get a taco from the Taco Bell drive through, but it has a height limit of 9 feet. Will Tammy be able to drive through safely? Show all work and justify your answer.



19. A land developer plans to build a road and needs to determine the distance to the village. How long of a road will he build?

