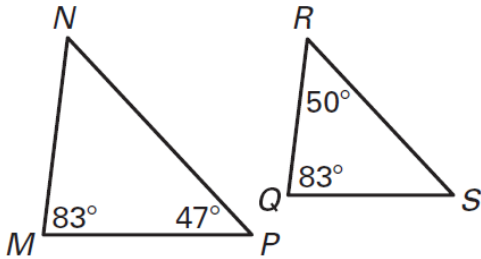


Name: \_\_\_\_\_ Period: \_\_\_\_\_

### 7.5 – 7.7 Similarity and Quadrilaterals Quiz Review

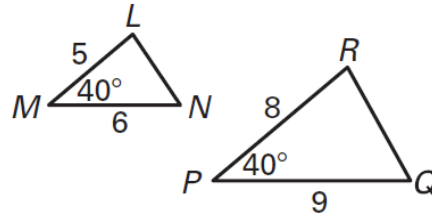
Decide whether the triangles below are similar. If they are, say how you know (AA, SAS, or SSS) and complete the similarity statement. Show all your work!

1.



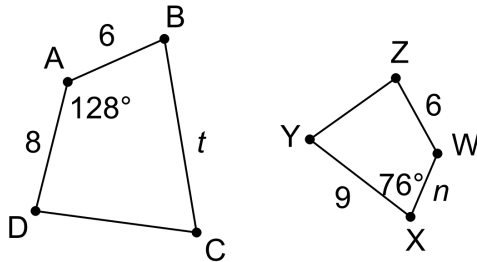
$\triangle NMP \sim$  \_\_\_\_\_

2.



$\triangle LMN \sim$  \_\_\_\_\_

Answer questions 3-7 using the diagram below, where  $ABCD \sim WXYZ$ . Show your work for full credit!



3. What is  $m\angle B$ ?

4. What is  $m\angle W$ ?

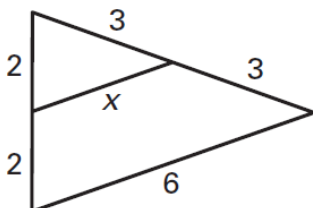
5. What is the scale factor?

6. Find the value of  $n$ .

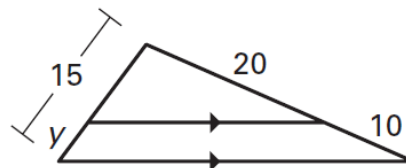
7. Find the value of  $t$ .

In questions 8-11, find the value of the variable. Show your work for full credit!

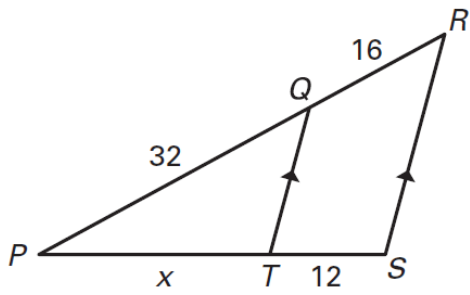
8.



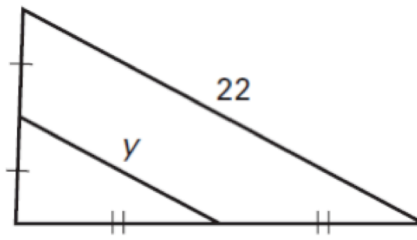
9.



10.



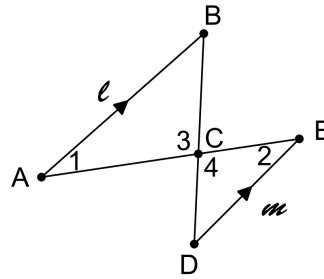
11.



Prove the following:

12. Given:  $l \parallel m$

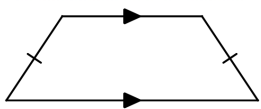
Prove:  $\triangle ABC \sim \triangle EDC$



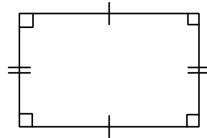
Statements	Reasons
1.	1.
2.	2. Alternate Interior Angle Theorem
3. $\angle 3 \cong \angle 4$	3.
4. $\triangle ABC \sim \triangle EDC$	4.

Give the most specific name for each figure.

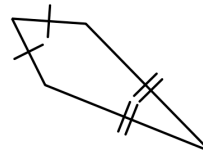
13.



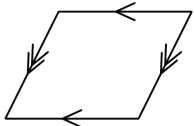
14.



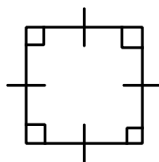
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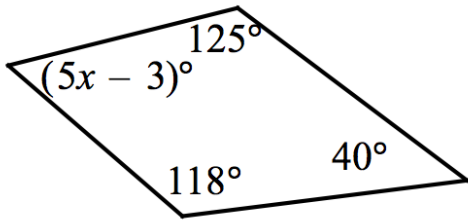
16.



17.

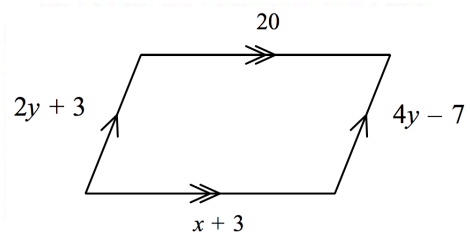


18. Find the value of  $x$  in the *quadrilateral* below. Show your work!

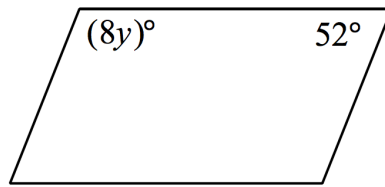


**Directions:** Find the requested values in the *parallelograms* below. Show your work!

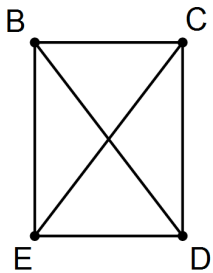
19. Find the values of  $x$  and  $y$ .



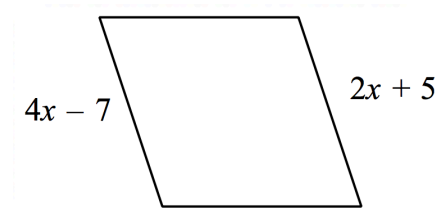
20. Find the value of  $y$ .



21. Find the value of  $x$  in the *rectangle* below. In *rectangle*  $BCDE$ ,  $BD = 3x - 8$  and  $CE = 19$ .



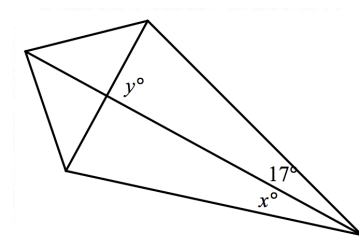
22. Find the value of  $x$  in the *rhombus* below.



23. Find the value of  $x$  in the *isosceles trapezoid* below.

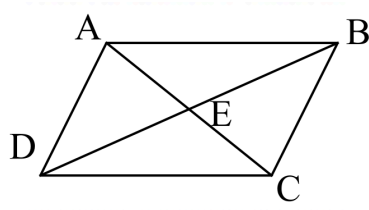


24. Find the value of  $x$  and  $y$  in the *kite* below.

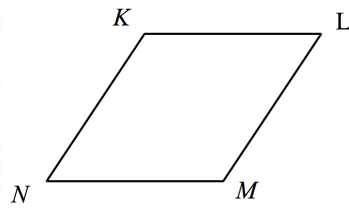


Can you prove that the quadrilateral is a parallelogram based on the given information? Justify your answer.

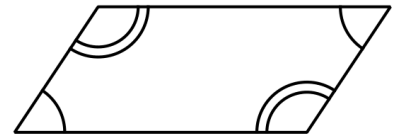
25.  $\overline{AE} \cong \overline{EC}$ ,  $\overline{BE} \cong \overline{ED}$



26.  $\overline{KL} \parallel \overline{NM}$ ,  $\overline{KN} \parallel \overline{LM}$



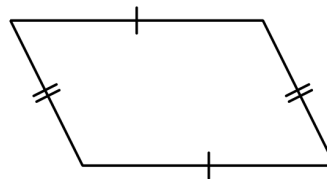
27.



28.

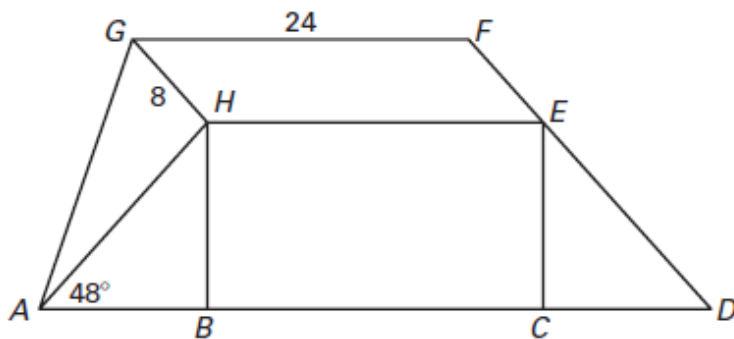


29.



30. Complete each problem below. If the problem asks you to explain your reasoning, use complete sentences. If it asks which theorem you used, write out the theorem in words (look at your notes).

In the diagram below,  $EFGH$  is a parallelogram,  $BCEH$  is a rectangle,  $ADEH$  is an isosceles trapezoid, and  $AD = 2 \cdot BC$ .



- Find the measure of  $\angle HBC$ . Explain your reasoning.
- Use a theorem about isosceles trapezoids to find the measure of  $\angle FDC$ . What theorem did you use?
- Explain why the measure of  $\angle HEF$  is  $48^\circ$ .
- Use a property of parallelograms to find the measure of  $\angle EFG$ .
- Find  $HE$ . What theorem did you use?
- Find  $BC$ . Explain your reasoning.
- Find  $AD$ . Explain your reasoning.
- Critical Thinking** Add the midpoint of  $\overline{AH}$  to the diagram and label it  $X$ . Add the midpoint of  $\overline{DE}$  and label it  $Y$ . Find the length of  $\overline{XY}$ .