Name_____ Period_____ Date_____ /20

Geometry 9 Quiz 9-1 to 9-3 (A)

Use the diagram at the right to answer items 1-6, where Quadrilateral ABCD ~ Quadrilateral WXYZ. *(6 marks)* Hint: you may have to re-orientate the drawings to match up the correct vertices.

1. Find the <u>simplified</u> common ratio from ABCD to WXYZ.

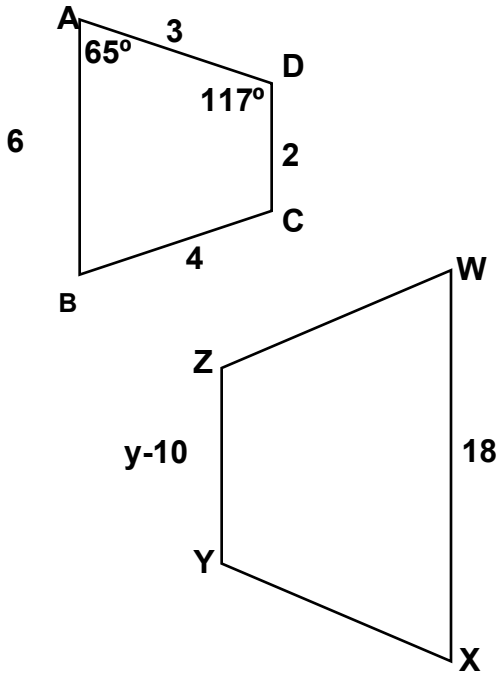
2. Find the m∠W.

3. Find YX.

4. Find the perimeter of Quadrilateral WXYZ.

5. Name the included angle of sides $\overline{BC}$ and $\overline{CD}$.

6. Find y.



For items 7-11: If the statement is true, write the word TRUE. If the statement is false, write the word FALSE. If you write FALSE, then write a word to replace the underlined word in the statement that would make the statement true. *(4 marks)*

7. If two triangles are similar, then their corresponding sides are <u>congruent</u>.

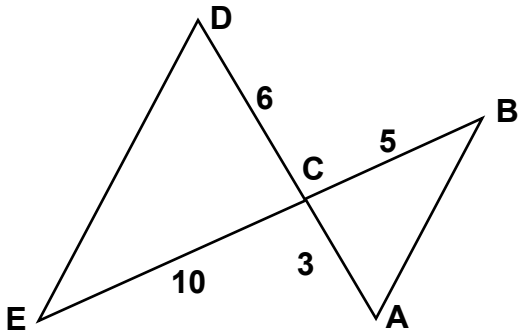
8. Intuitively, if two triangles are <u>similar</u>, then they have the same shape and size.

9. If two polygons are similar, then their common ratio is equal to the ratio of their <u>perimeters</u>.

10. If two polygons are congruent, then they are similar polygons whose common ratio is <u>1</u>.

11. Two similar polygons have a common ratio of 2:5. If the smaller perimeter is 100 km, then the perimeter of the other polygon is <u>500</u> km.

12. In the diagram to the right: *(3 marks)*

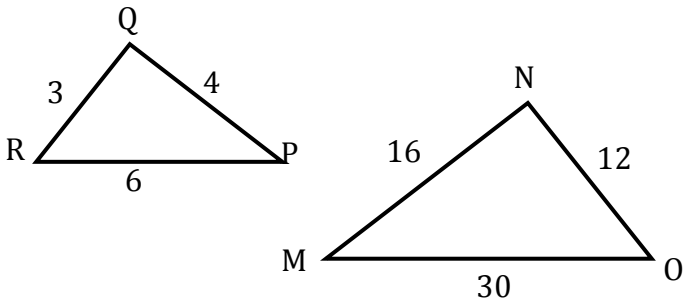


a. Are the triangles similar?

b. If your answer is <u>not</u> YES, explain your answer. If your answer is YES, then name the shortcut that applies.

c. Write the similarity statement **only** if you answered YES: △_____- △_____

13. In the diagram to the right: *(3 marks)*



a. Are the triangles similar?

b. If your answer is <u>not</u> YES, explain your answer. If your answer is YES, then name the shortcut that applies.

c. Write the similarity statement **only** if you answered YES: △_____~ △_____

14. The lengths of the sides of a triangle are in the ratio 3:6:7. Its perimeter is 96 cm. Find the length of the <u>longest side</u> of the triangle. *(2 marks).*

Length of longest side = _____

15. In one or two sentences, explain what it means to have similar triangles and compare similar triangles with congruent triangles. *(2 marks)*