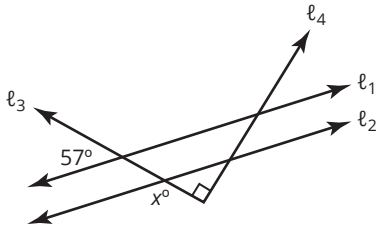
Enhanced End of Topic Assessment

Name _____ Date _____

Part A: Multiple-Choice Questions

1. In the figure shown, $\ell_1 \parallel \ell_2$ and $\ell_3 \perp \ell_4$.



What is the value of x?

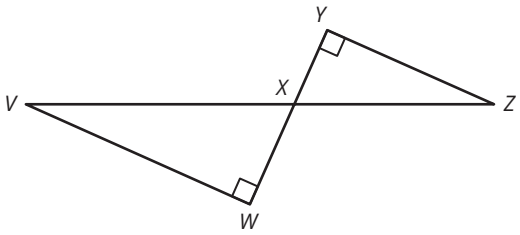
a. 147

b. 57

c. 123

d. 33

2. Which conclusion about the two triangles shown is correct?



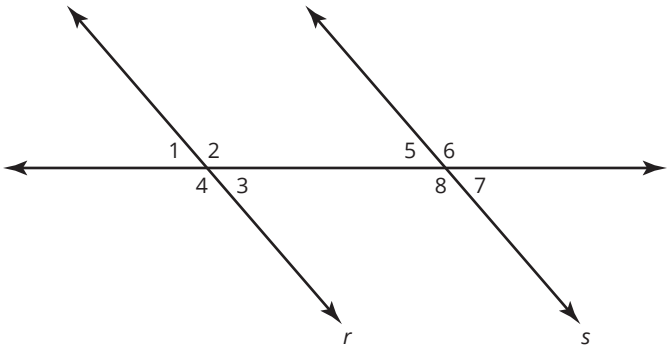
a. $\Delta VWX \sim \Delta ZYX$ by the AA Similarity Theorem.

b. $\Delta VXW \sim \Delta XYZ$ by the AA Similarity Theorem.

c. The triangles are not similar.

d. There is not enough information to determine whether the triangles are similar.

3. In the figure shown, $r \parallel s$.



If the measure of $\angle 1$ is 34°, which statement is true?

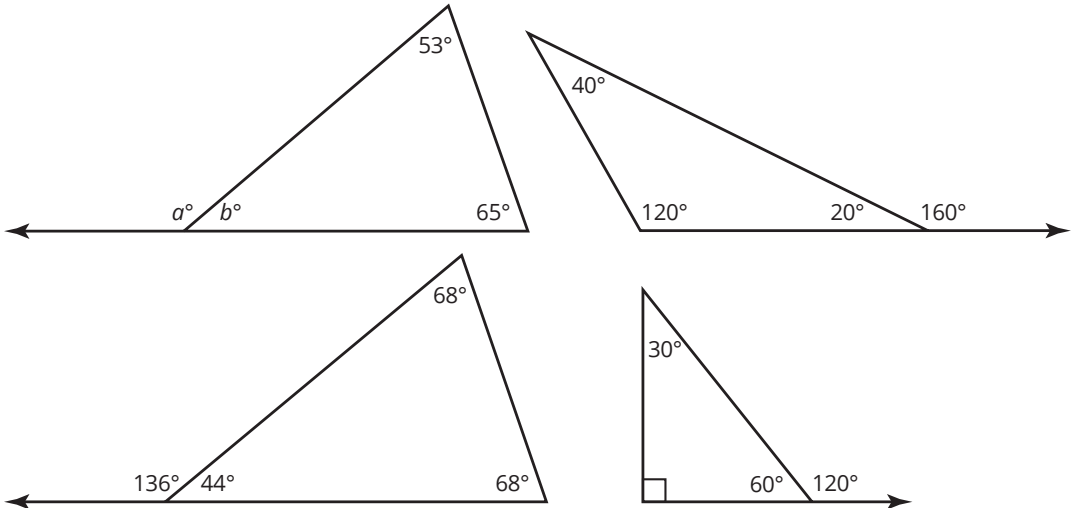
a. The measure of $\angle 6$ is also 34° because corresponding angles are congruent.

b. The measure of $\angle 7$ is 56° because $\angle 1$ and $\angle 7$ are complementary angles.

c. The measure of $\angle 7$ is 146° because $\angle 1$ and $\angle 7$ are supplementary angles.

d. The sum of the measures of $\angle 1$ and $\angle 6$ is 180° because they are supplementary angles.

4. Four triangles are shown. One side of each triangle lies on a ray, and the triangles are not drawn to scale.



Based on these triangles, which statement is true?

a. $a = 298$, because $53 + 65 = 118$ and $118 + 180 = 298$.

b. $a = 168$, because $180 - 65 = 115$ and $115 + 53 = 168$.

c. $a = 62$, because $53 + 65 = 118$ and $180 - 118 = 62$.

d. $a = 118$, because $180 - (53 + 65) = 62$ and $180 - 62 = 118$.

5. The measure of $\angle RST$ is 46°. The measure of an angle supplementary to $\angle RST$ is $(2x)°$. What is the value of x?

a. 22

b. 44

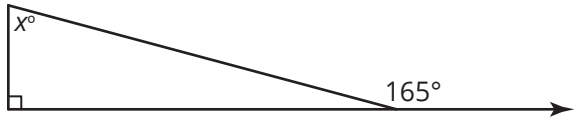
c. 67

d. 134

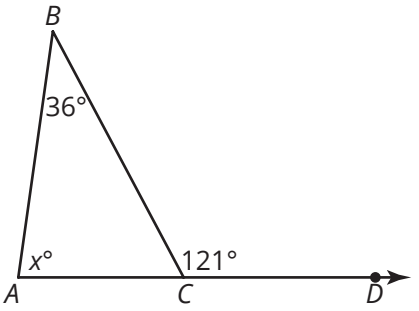
Part B: Open-Response Questions

6. Determine the value of *x* in each diagram. Show your work.

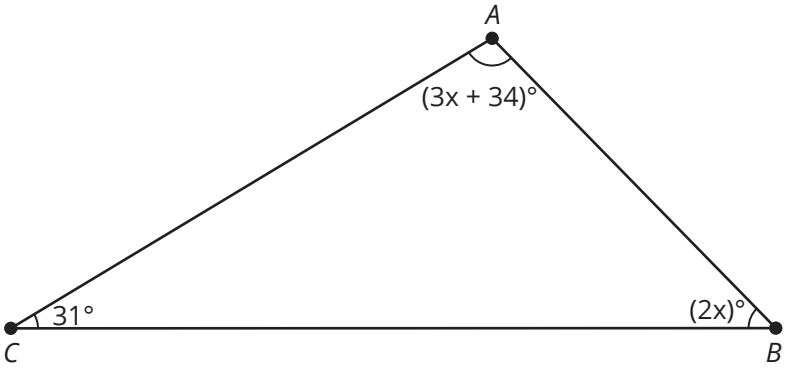
a.



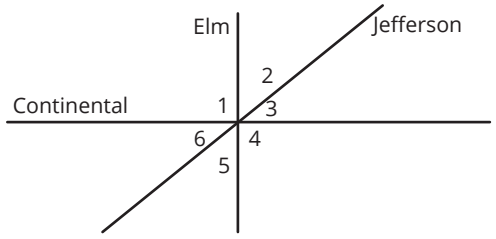
b.



7. Determine the measure of each unknown angle.

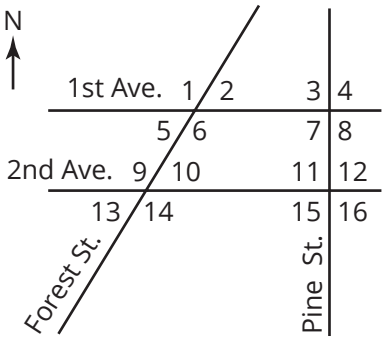


8. Elm Street, Continental Road, and Jefferson Avenue intersect at one point on the map shown. Elm Street and Continental Road are perpendicular to each other.



If the measure of $\angle 2 = (2x + 10)°$ and $m\angle 3 = 40°$, determine the value of x.

9. The map shows a portion of downtown Prairie View. 1st Avenue is parallel to 2nd Avenue. Use the map to answer each question.

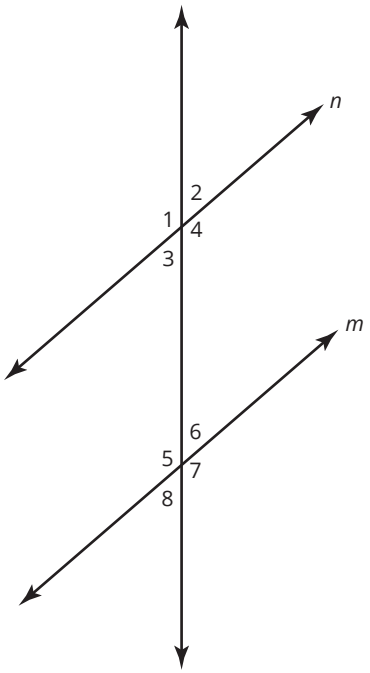


a. Identify a pair of vertical angles.

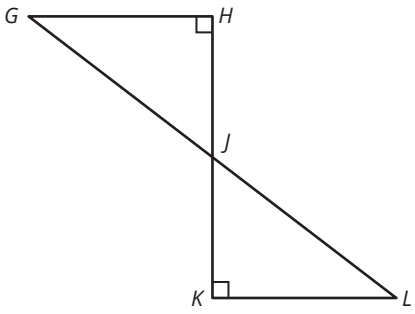
b. Identify a pair of alternate interior angles.

c. Identify a pair of same-side exterior angles.

10. In the figure shown, $m \parallel n$. If $m\angle 2 = 53°$, determine the measures of the other seven angles in the figure.

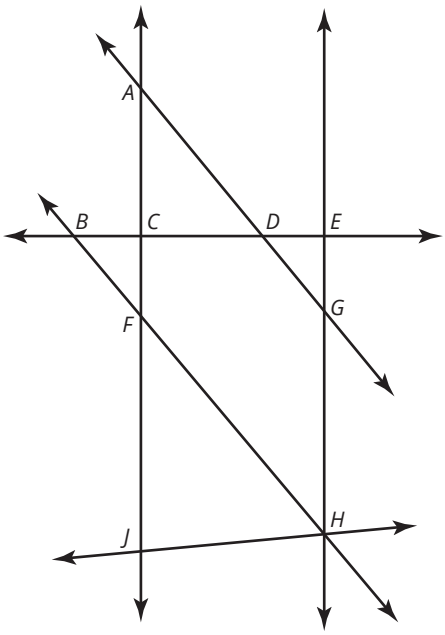


11. Determine whether the triangles are similar. If there is sufficient information to determine that the triangles are similar, write a similarity statement and explain your reasoning. If there is not sufficient information, explain your reasoning.



12. An isosceles triangle has base angles that each measure $x°$. The measure of the third angle is 78°. Write an equation that can be used to determine x, the measure of each base angle of this isosceles triangle.

13. In the figure shown, $\overline{AF} \parallel \overline{EH}, \overline{AG} \parallel \overline{BH}, \overline{BE} \perp \overline{AF}, \overline{BE} \perp \overline{EH}$.



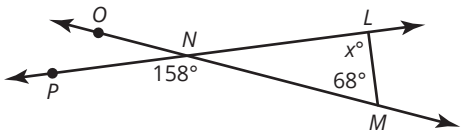
a. Is $\Delta DEG \sim \Delta HJF$? Explain your reasoning.

b. Is $\Delta ACD \sim \Delta BCF$? Explain your reasoning.

Part C: Griddable Response Questions

Record your answers and fill in the bubbles. Be sure to use the correct place value.

14. What is the value of x?



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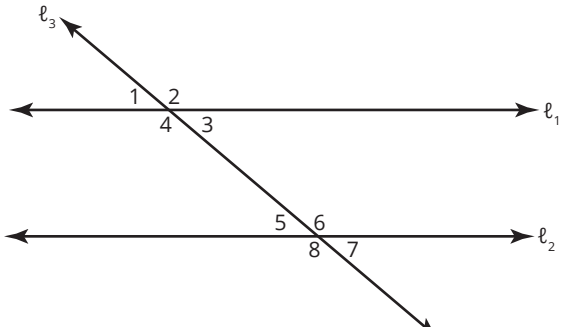
+	0	0	0	0		0	0
−	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

15. In the figure shown, $\ell_1 \parallel \ell_2$. If $m\angle 6 = 146°$, what is the measure of angle 1?



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−	1	1	1	1		1	1
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	3	3	3	3		3	3
	4	4	4	4		4	4
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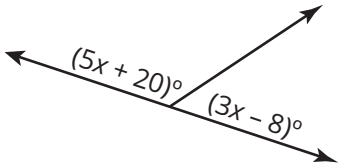
16. In the figure shown, determine the measure of the larger angle.



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	9	9	9	9		9	9