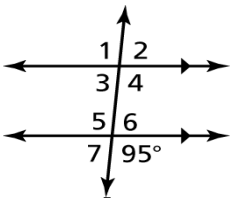
Name _____ Date_____

Review 3.1-3.2

Part I: Parallel Lines and Transversals.

Use the figure to find the measure of the angle. Explain your reasoning.



1. $\angle 6$ = _____, because _____

_____.

2. $\angle 5$ = _____, because _____

_____.

3. $\angle 3$ = _____, because _____

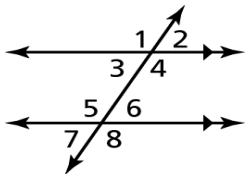
_____.

4. $\angle 2$ = _____, because _____

_____.

Find the missing angle measure.

5. If the measure of $\angle 3 = 46°$, then the measure of $\angle 6$ = _____ .



6. If the measure of $\angle 1 = 102°$, then the measure of $\angle 8$ = _____ .

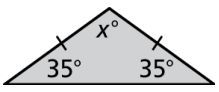
7. If the measure of $\angle 4 = 98°$, then the measure of $\angle 7$ = _____ .

8. If the measure of $\angle 6 = 59°$, then the measure of $\angle 4$ = _____ .

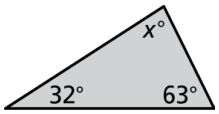
Part II: Angles of Triangles.

Find the measures of the interior angles. Show algebraic work.

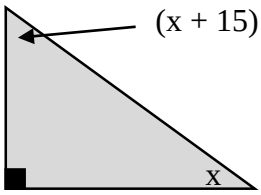
9.



10.

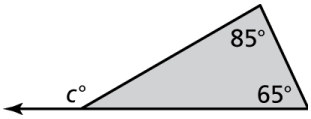


11. Find the value of the missing interior angle measures. Show algebraic work.



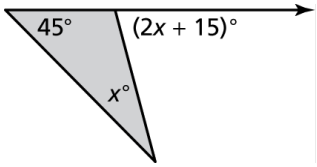
Find the measure of the exterior angle. Show algebraic work.

12.



***c* = _____**

13.



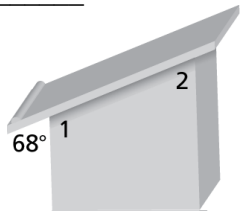
***(2x + 15)* = _____**

<u>Part III</u>: Problem Solving.

14. A lectern has four vertical sides and a slanted top. Find the measures of $\angle 1$ and $\angle 2$. Explain your reasoning.

$\angle 1$ = _____, because _____

_____.



$\angle 2$ = _____, because _____

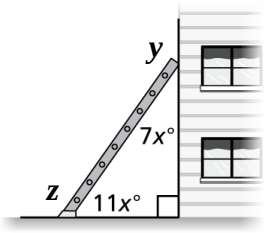
_____.

15. A ladder leaning against a wall forms a triangle and exterior angles with the wall and the ground. What are the measures of exterior angles ***y*** and ***z***? Use an equation to justify or prove your answer.

Work space:

y = _____

Work space:



z = _____