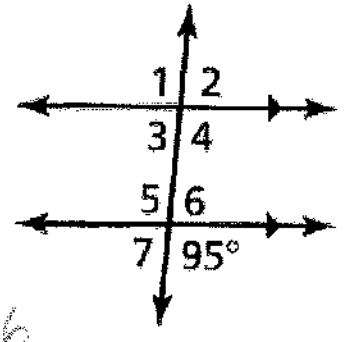
Name _____ Date _____

Chapter 3 Quiz

For use after Section 3.2

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



1. $\angle 3 = 95°$
Alternate Interior to $\angle 6$
Supplementary to 95°

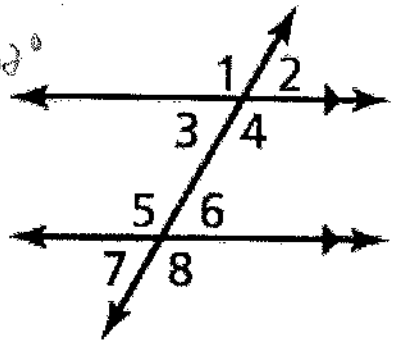
2. $\angle 5 = 95°$
Vertical to 95°

3. $\angle 6 = 85°$
Supplementary to 95°

4. $\angle 2 = 85°$
Corresponds to $\angle 6$ which is supplementary to 95°

Complete the statement. Explain your reasoning.

5. If the measure of $\angle 3 = 46°$, then the measure of $\angle 6 =$? . 46°
Alternate Interior Angles

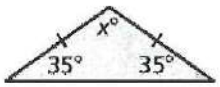


6. If the measure of $\angle 5 = 102°$, then the measure of $\angle 8 =$? . 102°
Vertical Angles

7. If the measure of $\angle 4 = 98°$, then the measure of $\angle 7 =$? .
Corresponds to $\angle 8$ and Supplementary to $\angle 7$ 82°

8. If the measure of $\angle 6 = 59°$, then the measure of $\angle 4 =$? . 121°
Supplementary to $\angle 4$

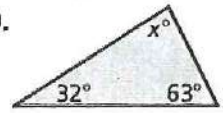
Find the measures of the missing interior angles. Show your work.

9. 

35+35+x=180

70+x=180

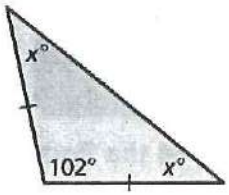
x=110

10. 

32+63+x=180

95+x=180

x=85

11. 

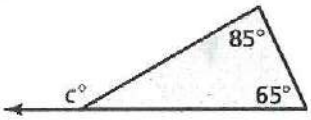
x+x+102=180

2x+102=180

2x=78

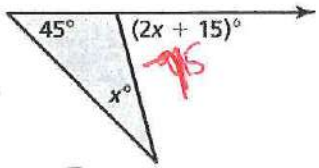
x=39

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



c=85+65

c=150

13. 

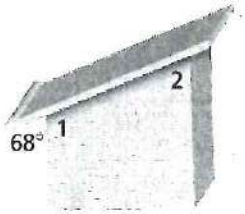
45+x=2x+15

-x -x

45=1x+15

x=30

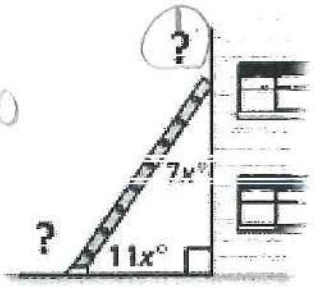
14. A lectern has four vertical sides and a slanted top. Find the measures of ∠1 and ∠2. **Explain your reasoning.**



∠1=112° → Supplementary to 68°

∠2=68° → Corresponds to 68°

15. A ladder leaning against a wall forms a triangle and exterior angles with the wall and the ground. What are the measures of the exterior angles? **Justify your answer.**



∠1 → 11x+90

55+90 145

∠2 → 7x+90

55+90=125

7x+11x+90=180

18x=90

18 18

x=5