

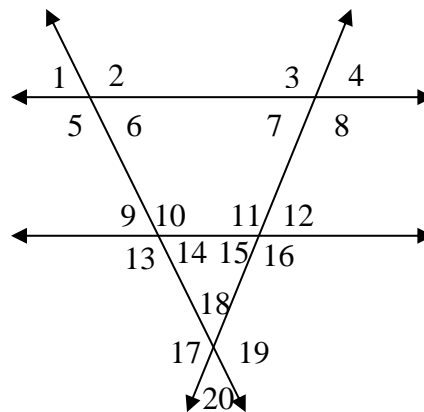
**Test Review – Chapter 3 Parallel and Perpendicular Lines**

Use when you get it right all by yourself  
**S** Use when you did it all by yourself, but made a silly mistake  
**H** Use when you could do it alone with a little help from teacher or peer  
**G** Use when you completed the problem in a group  
**X** Use when a question was attempted but wrong (get help)  
**N** Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Classifying Angle Pairs	1 - 8	1 - 8	
Congruent Angles	9, 10	12 - 15	
Supplementary Angles	11	12 - 15	
Solving & Setting up Equations with Parallel lines & a transversal		16 - 21	16 - 21
Solving for angles measures using linear pairs, vertical angles, and triangle sums		22 - 26	22 - 26
Slopes of Parallel & Perpendicular Lines		27 - 29	27 - 29
Writing equations of parallel & perpendicular lines		27 - 29	27 - 29
Two-column proofs			30 - 32

I. Classify each pair of angles as *alternate interior angles*, *alternate exterior angles*, *corresponding angles*, *same-side interior angles*, *same-side exterior angles*, *linear pair*, *vertical angles*, or *None*.

- \_\_\_\_\_ 1.  $\angle 1$  &  $\angle 3$
- \_\_\_\_\_ 2.  $\angle 6$  &  $\angle 7$
- \_\_\_\_\_ 3.  $\angle 2$  &  $\angle 7$
- \_\_\_\_\_ 4.  $\angle 10$  &  $\angle 11$
- \_\_\_\_\_ 5.  $\angle 1$  &  $\angle 8$
- \_\_\_\_\_ 6.  $\angle 4$  &  $\angle 15$
- \_\_\_\_\_ 7.  $\angle 6$  &  $\angle 16$
- \_\_\_\_\_ 8.  $\angle 20$  &  $\angle 5$



9. If  $a \parallel b$ , but  $c$  is not parallel to  $d$ , name all angles congruent to  $\angle 2$ .

10. If  $c \parallel d$ , but  $a$  is not parallel to  $b$ , name all angles congruent to  $\angle 2$ .

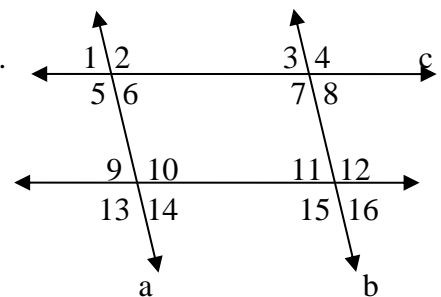
11. If  $a \parallel b$  and  $c \parallel d$ , name all the angles supplementary to  $\angle 1$ .

12. If  $m\angle 13 = 123^\circ$ ,  $a \parallel b$  and  $c \parallel d$ ,  
then  $m\angle 15 =$  \_\_\_\_\_ and  $m\angle 3 =$  \_\_\_\_\_

13. If  $m\angle 6 = 38^\circ$ ,  $a \parallel b$  and  $c \parallel d$ , then  $m\angle 12 =$  \_\_\_\_\_, and  $m\angle 4 =$  \_\_\_\_\_.

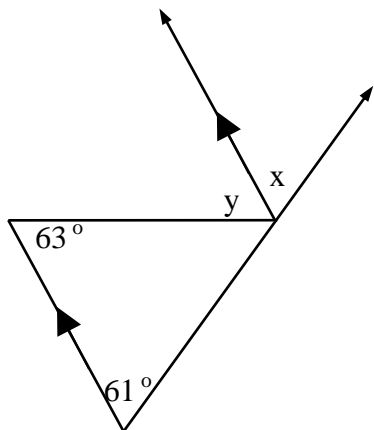
14. If  $m\angle 2 = 115^\circ$ ,  $m\angle 16 = 80^\circ$  and  $c \parallel d$ , then  $m\angle 14 =$  \_\_\_\_\_, and  $m\angle 7 =$  \_\_\_\_\_.

15. If  $m\angle 2 = 115^\circ$ ,  $m\angle 16 = 80^\circ$  and  $a \parallel b$ , then  $m\angle 14 =$  \_\_\_\_\_, and  $m\angle 7 =$  \_\_\_\_\_.



**16 – 21: Find the values of x and y.**

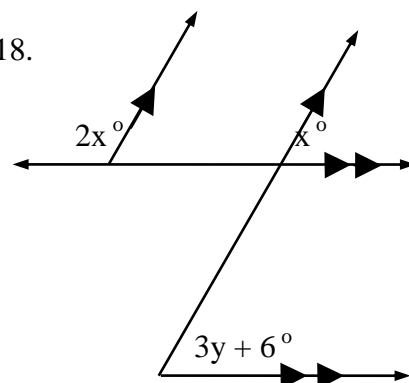
16.



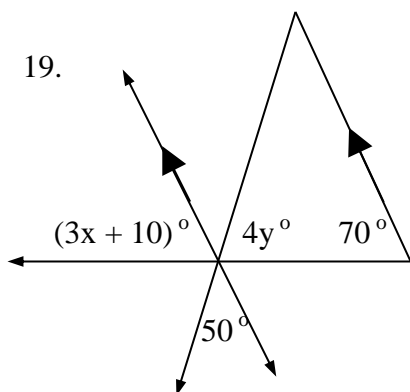
17.



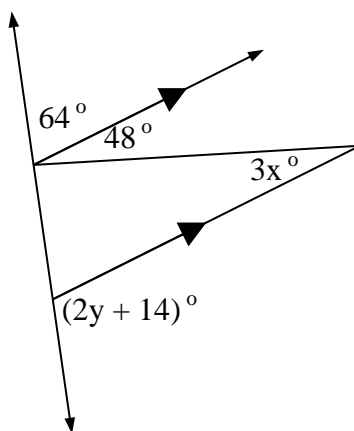
18.



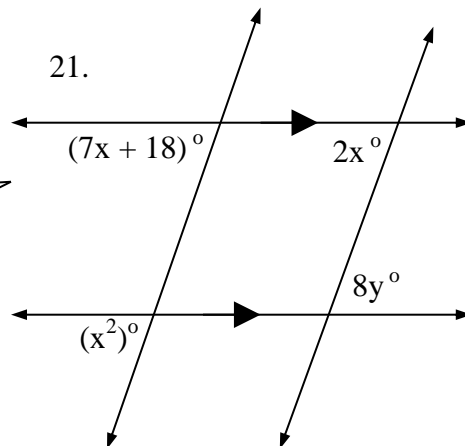
19.



20.



21.



**22 – 26: Use the diagram to answer the following.**

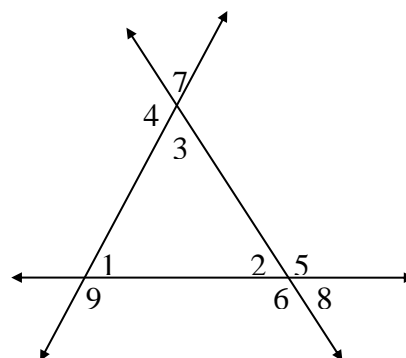
\_\_\_\_\_ & \_\_\_\_\_ 22.  $m\angle 4 = m\angle \_? \_ + m\angle \_? \_.$

\_\_\_\_\_ 23. If  $m\angle 1 = 37^\circ$  and  $m\angle 5 = 101^\circ$ , then  $m\angle 3 = \_? \_.$

\_\_\_\_\_ 24. If  $m\angle 7 = 73^\circ$  and  $m\angle 5 = 124^\circ$ , then  $m\angle 1 = \_? \_.$

\_\_\_\_\_ 25. If  $m\angle 1 = (4x + 8)^\circ$ ,  $m\angle 2 = 2(x + 2)^\circ$  and  $m\angle 3 = 6(x - 6)^\circ$ , then  $x = \_? \_$  and  $m\angle 4 = \_? \_.$

\_\_\_\_\_ 26. If  $m\angle 6 = (6x + 23)^\circ$ ,  $m\angle 1 = (5x - 19)^\circ$  and  $m\angle 3 = 7(x - 12)^\circ$ , then  $x = \_? \_$  and  $m\angle 5 = \_? \_.$



**27 – 29: Write the equation of the line in slope-intercept form for the following.**

27. The perpendicular segment with endpoints (-4, 9) and (12, -5).

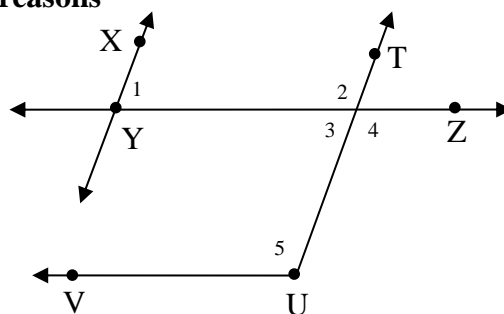
28. The line that contains (6, 1) that is perpendicular to the line containing (3, -2) and (5, 7).

29. In a coordinate plane, the line that passes through the points (-1, 6) and (8,-5) is perpendicular to the line that passes through (1,-12) and (-10, q). Find q.

**Two-Column proofs. Be sure to number your statements and reasons**

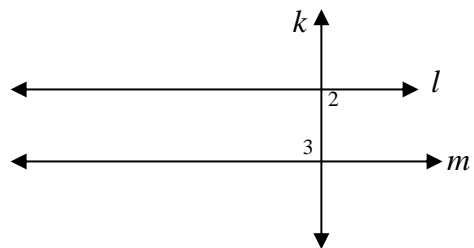
Given:  $m\angle 1 + m\angle 4 = 180^\circ$ ,  $m\angle 1 + m\angle 5 = 180^\circ$

Prove:  $\overleftrightarrow{YZ} \parallel \overleftrightarrow{UV}$



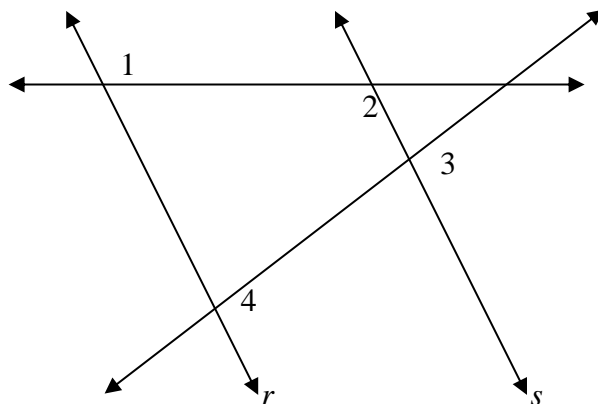
31. Given:  $k \perp l, k \perp m$

Prove:  $l \parallel m$



32. GIVEN:  $r \parallel s$  and  $\angle 2 \cong \angle 3$

PROVE:  $\angle 1 \cong \angle 4$ .



---

**CYU Reflection:** *How far can you go: basic, intermediate, or advanced?*

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

