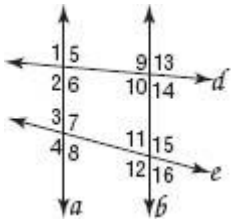
Chapter 3 REVIEW Name _____

1. Be able to construct a line parallel and perpendicular to a given line through a given point.

Identify each pair of angles as *alternate interior, alternate exterior, corresponding*, or *consecutive interior angles*.



2. ∠5 and ∠13 2._____

3. ∠7 and ∠12 3. _____

4. ∠9 and ∠16 4. _____

5. Given $a \parallel b$ and $m\angle 6 = 89$, find $m\angle 10$. 5. _____

6. Find the values of x and y given $a \parallel b$, $m\angle 8 = 4x + 10$, $m\angle 12 = 7x - 17$, and $m\angle 11 = 3y$. 6. _____

Determine the slope of the line that contains the given points.

8. $P(-5, 11)$, $R(5, 7)$ 8. _____

9. $B(7, -1)$, $G(14, 0)$ 9. _____

10. $U(-6, 9)$, $V(-3, 8)$ 10. _____

For Questions 11-13, determine whether $\overleftrightarrow{BT}$ and $\overleftrightarrow{MV}$ are *parallel, perpendicular*, or *neither*.

11. $B(1, -4)$, $T(5, 12)$, $M(-8, 3)$, $V(-4, 2)$ 11. _____

12. $B(-5, -7)$, $T(10, 17)$, $M(-5, -10)$, $V(5, 6)$ 12. _____

13. $B(3, -5)$, $T(5, -1)$, $M(-2, 6)$, $V(4, 3)$ 13. _____

Write an equation in slope-intercept form for the line that satisfies the given conditions.

15. $m = 7$, y-intercept = -8 15. _____

16. $m = -4$, passes through (-4, 8) 16. _____

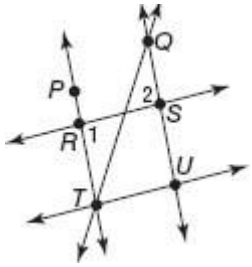
17. x-intercept is -5, y-intercept is 2 17. _____

Given the following information, determine which lines, if any, are parallel. State the postulate or theorem that justifies your answer.

19. $\angle QSR \cong \angle SUT$ 19. _____

20. $\angle 1 \cong \angle 2$ 20. _____

21. $m\angle RTU + m\angle TUS = 180$ 21. _____



22. Find the value of x so that $p \parallel q$. 22. _____