

Name key

Hour _____

Chapter 3 Review

Use the cube to the right to answer the following questions.

1. \overline{WZ} and \overline{RS} are what type of lines?

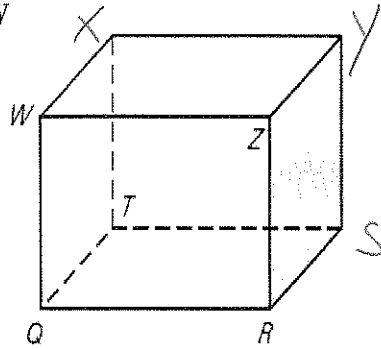
Skew

2. \overline{WZ} and \overline{QR} are what type of lines?

Parallel

3. \overline{WZ} and \overline{WQ} are what type of lines?

Perpendicular



Use the diagram to complete the next six statements with:

- A. Corresponding Angles
- B. Alternate Interior Angles
- C. Alternate Exterior Angles
- D. Consecutive Interior Angles

4. $\angle 1$ and $\angle 7$ *C*

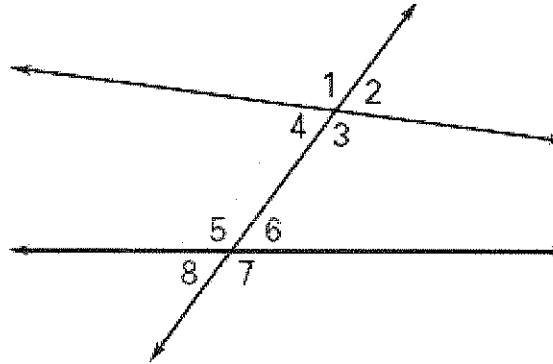
5. $\angle 4$ and $\angle 6$ *B*

6. $\angle 2$ and $\angle 6$ *A*

7. $\angle 3$ and $\angle 6$ *D*

8. $\angle 2$ and $\angle 8$ *C*

9. $\angle 1$ and $\angle 5$ *A*



In the figure shown to the right, $\overline{EG} \parallel \overline{FH}$ and $m\angle ABE = 95^\circ$.

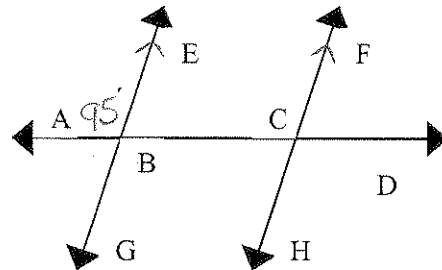
Answer the following statements as true or false.

10. $m\angle FCD = 85^\circ$ *True*

11. $m\angle HCD = 85^\circ$ *False*

12. $\angle ABG$ and $\angle ACH$ are corresponding angles *True*

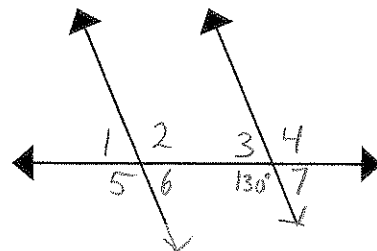
13. $\angle GBD$ and $\angle ACF$ are alternate interior angles *True*



Use the figure to the right to find the measure of each angle.

14. $m\angle 1 = 50^\circ$

18. $m\angle 5 = 130^\circ$



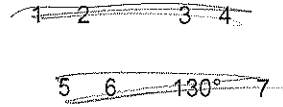
15. $m\angle 2 = 130^\circ$

19. $m\angle 6 = 50^\circ$

16. $m\angle 3 = 50^\circ$

20. $m\angle 7 = 50^\circ$

17. $m\angle 4 = 130^\circ$



Find the value of x.

21. $2x - 4 = 92$
 $2x = 96$
 $x = 48$

22. $x + 20 + x = 180$
 $2x + 20 = 180$
 $2x = 160$
 $x = 80$

Find the value of x and y.

23. $x = 95$
 $y = 85$

24. $x = y = 75$

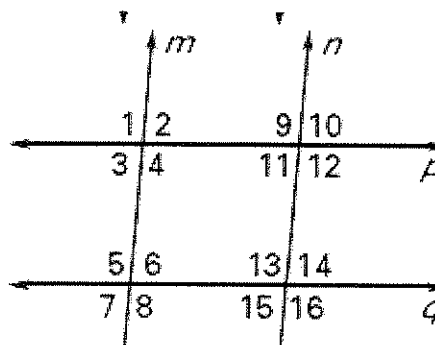
Use the diagram below and the given information to determine if $m \parallel n$, $p \parallel q$, or neither.

25. $\angle 2 \cong \angle 11$ $m \parallel n$

26. $\angle 1 \cong \angle 8$ $p \parallel q$

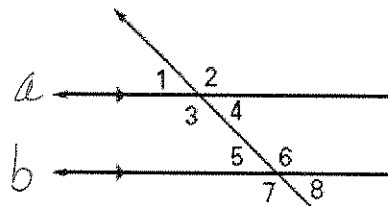
27. $\angle 10 \cong \angle 14$ $p \parallel q$

28. $\angle 2 \cong \angle 10$ $m \parallel n$



Use the given angle measures to decide whether lines a and b are parallel for the next two questions.

29. $m\angle 3 = 86^\circ$, $m\angle 6 = 94^\circ$ Not parallel



30. $m\angle 1 = 63^\circ, m\angle 6 = 117^\circ$ $a \parallel b$

Use the diagram above to answer the following questions as True or False.

31. $\angle 4$ and $\angle 6$ are supplementary angles? 32. $\angle 2$ and $\angle 7$ are congruent angles?

True

True

33. $\angle 3$ and $\angle 6$ are not congruent angles? 34. $\angle 3$ and $\angle 5$ are congruent angles?

False

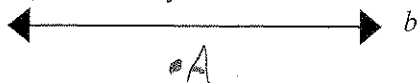
False

35. Name all congruent angles from the diagram above.

$\angle 1 \cong \angle 4 \cong \angle 5 \cong \angle 8$

$\angle 2 \cong \angle 3 \cong \angle 6 \cong \angle 7$

36. In the diagram below, how many lines can be drawn through point A that are parallel to line b?



ONE

37. Write an equation in slope-intercept form that is parallel to $y = 2x - 2$ and passes through point $(0, 0)$.

$y = 2x$

38. Write an equation in slope-intercept form that is parallel to $y = 4x + 1$ and passes through point $(2, 5)$.

$y = 4x + b$
 $5 = 4(2) + b$
 $5 = 8 + b$

$b = -3$

$y = 4x - 3$

39. Write an equation in slope-intercept form that is perpendicular to $y = \frac{1}{2}x + 4$ and passes through point $(4, 2)$.

$y = -2x + b$
 $2 = -2(4) + b$
 $2 = -8 + b$
 $10 = b$

$y = -2x + 10$

40. Write an equation in slope-intercept form that passes through the point $(0, 2)$ and has a slope of 5.

$y = 5x + 2$

41. Find the slope of the line that passes through the points $(-4, 2)$ and $(0, 3)$.

$y = \frac{1}{4}x + 3$

$m = \frac{2-3}{-4-0} = \frac{-1}{-4}$

42. Line k passes through points $(-1, 2)$ and $(3, 5)$. Line n passes through the points $(3, 7)$ and $(6, 3)$. Are lines k and n parallel, perpendicular, or neither?

$m_k = \frac{2-5}{-1-3} = \frac{-3}{-4} = \frac{3}{4}$

$m_n = \frac{7-3}{3-6} = \frac{4}{-3}$

Perpendicular

43. What would the slope of a line be that was parallel to $y = 2x - 5$?

$m = 2$

44. What would the slope of a line be that was perpendicular to $y = -\frac{1}{2}x + 2$?

$m = 2$

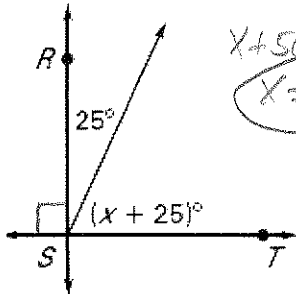
45. What would the slope of a line be that was parallel to $4x + 2y = 8$?

$m = -2$

Find the value of x.

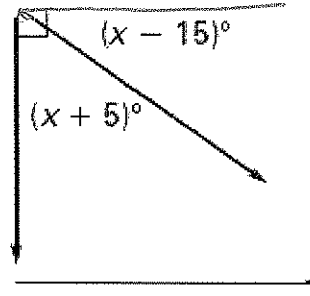


46.



$x + 50 = 90$
 $x = 40$

* 47.



$x - 15 + x + 5 = 90$
 $2x - 10 = 90$
 $2x = 100$
 $x = 50$

Use the diagram below to answer the following questions as True or False.

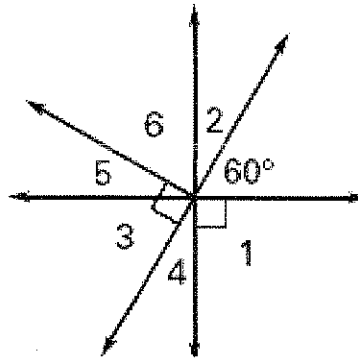
48. $\angle 5 + \angle 3 = 90^\circ$ True

49. $\angle 2 \cong \angle 4$ True

50. $\angle 5$ & $\angle 6$ are supplementary False

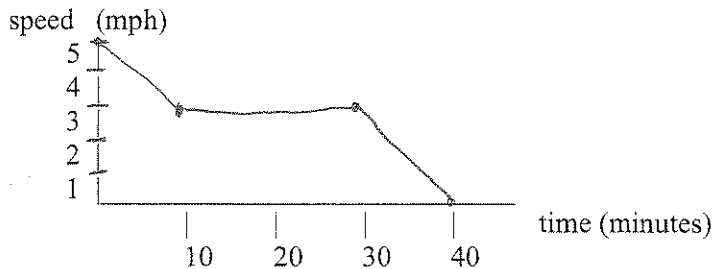
51. $m\angle 5 + m\angle 6 = m\angle 1$ True

52. $m\angle 2 = 30^\circ$ True



53. Create a graph indicating the following.

A bird begins its travel south at 5 mph, then slows to 3 mph in the first 10 minutes. It maintains that speed for the next 20 minutes, and then slows to a stop in the next 10 minutes.



54. At 10:25 AM a rock climber is 1200 feet above the ground. At 10:28 AM the climber is 800 feet above the ground. Find the average rate of change in feet per minute of the rock climber.

$\frac{-400}{3} = -\frac{400}{3} \frac{ft}{min}$

55. If line m and n are parallel, then what is the measure, in degrees, of $\angle ABC$?

$m\angle ABC = 30^\circ$

