NAME_____**DATE**_____**PER.**_____

CHAPTER 3 TEST REVIEW
PARALLEL LINES & ANGLES
+5 added to your test, if complete

VOCABULARY

Alternate Exterior Angles	Alternate Interior Angles	Corresponding Angles
Parallel Lines	Parallel Planes	Perpendicular Bisector
Perpendicular Lines	Point-slope Form	Rise
Run	Same-side Interior Angles	Transversal

Complete the sentences below with vocabulary words from the list above.

1. Angles on opposite sides of a transversal and between the lines it intersects are _____.

2. Lines that intersect to form a right angle are _____.

3. A(n) _____ is a line that intersects two coplanar lines at two points.

4. The _____ is used to write the equation of a line with a given slope that passes through a given point.

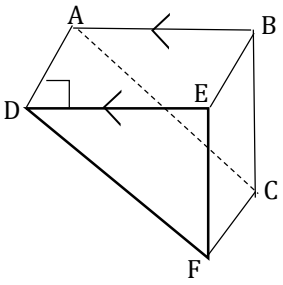
5. The slope of a line is the ratio of the _____ to the _____.

Identify each of the following.

6. A pair of perpendicular segments

7. A pair of parallel segments

8. A pair of parallel planes



IDENTIFYING ANGLE PAIRS

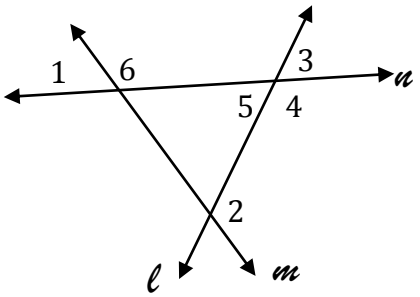
Identify the transversal and classify each angle pair.

9. ∠5 and ∠2 _____

10. ∠6 and ∠3 _____

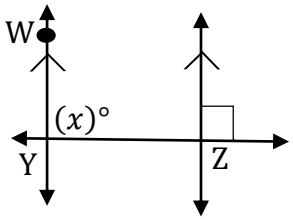
11. ∠2 and ∠4 _____

12. ∠1 and ∠2 _____

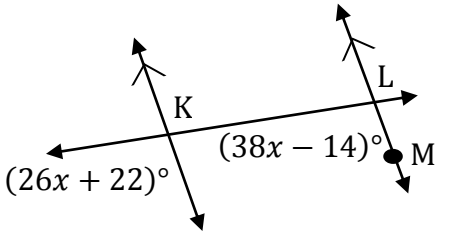


ANGLE PAIRS & ALGEBRA
Find each angle measure.

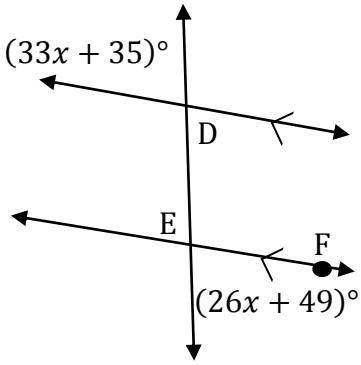
13. $m\angle WYZ =$_____



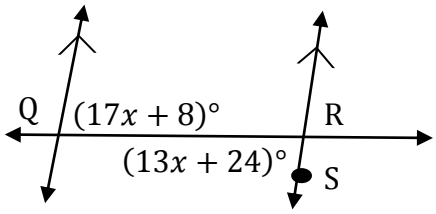
14. $m\angle KLM =$_____



15. $m\angle DEF =$_____



16. $m\angle QRS =$_____



CONVERSE THEOREMS

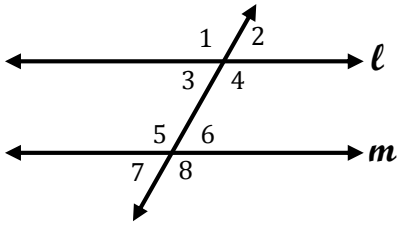
Use the given information, theorems, and postulates to show that $\ell \parallel m$.

17. $m\angle 4 = 58°$, $m\angle 5 = 58°$

18. $m\angle 1 = (23x + 38)°$, $m\angle 5 = (17x + 56)°$, $x = 3$

19. $m\angle 6 = (12x + 6)°$, $m\angle 4 = (21x + 9)°$, $x = 5$

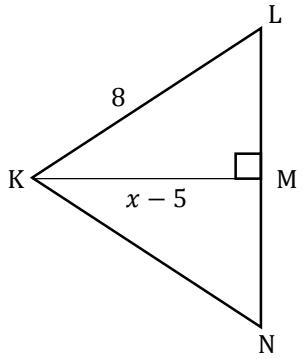
20. $m\angle 1 = 99°$, $m\angle 8 = (13x + 8)°$, $x = 7$



SHORTEST SEGMENT FROM A POINT TO A LINE

21. Name the shortest segment from point K to $\overleftrightarrow{LN}$.

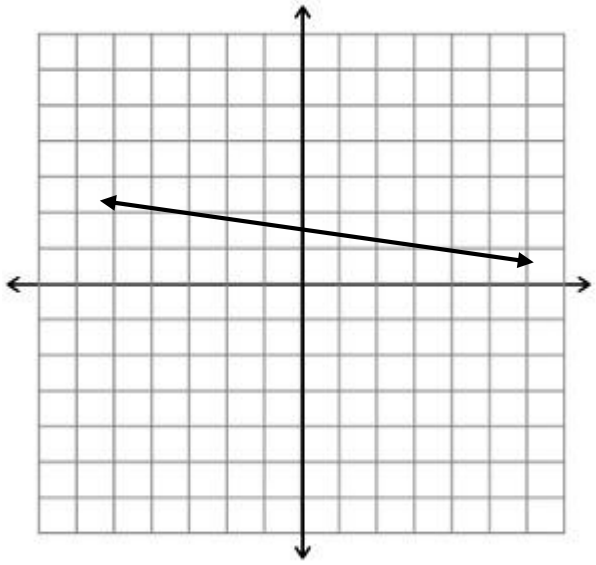
Write and solve an inequality for x.



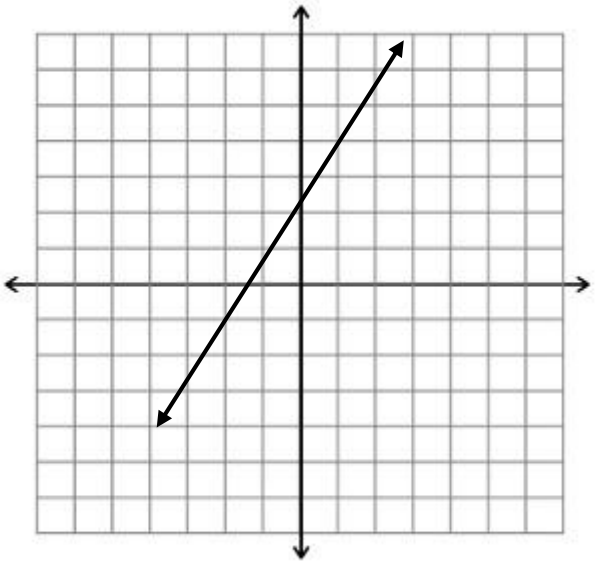
SLOPE

Find the slope of each line.

22. $m =$ _____



23. $m =$ _____



PARALLEL AND PERPENDICULAR LINES

Use slopes to determine if the lines are parallel, perpendicular, or neither.

24. $\overleftrightarrow{EF}$ and $\overleftrightarrow{GH}$ for $E(8,2)$, $F(-3,4)$, $G(6,1)$, and $H(-4,3)$ _____

25. $\overleftrightarrow{JK}$ and $\overleftrightarrow{LM}$ for $J(4,3)$, $K(-4,-2)$, $L(5,6)$, and $M(-3,1)$ _____

26. $\overleftrightarrow{ST}$ and $\overleftrightarrow{UV}$ for $S(-4,5)$, $T(2,3)$, $U(3,1)$, and $V(4,4)$ _____

27. $-3x + 2y = 5$, $6x - 4y = 8$ _____

28. $y = 4x - 3$, $5x + 2y = 1$ _____

29. $y = 2x + 1$, $-\frac{1}{2}x - y = -1$ _____

WRITING EQUATIONS OF LINES
Write the equation of each line in the given form.

30. The line through $(6,1)$ and $(-3,5)$ in slope-intercept form.

31. The line through $(-3,-4)$ with slope $\frac{2}{3}$ in slope-intercept form.

32. The line with an x-intercept of 1 and a y-intercept of -2 in point-slope form.

Answers to Chapter 3 Review

$\overline{AB}$ & $\overline{DE}$

m; Alternate Exterior Angles

Rise; Run

Neither

Parallel

$y = -\frac{4}{9}x + \frac{11}{3}$

$x - 5 < 8; x < 13$

ℓ; Same Side Interior Angles

$\angle 1 \cong \angle 5$; Corresponding Angles

ℓ; Alternate Interior Angles

79

100

Parallel

Perpendicular

$\overline{KM}$

Perpendicular Lines

90

$\angle 1 \cong \angle 8$; Alternate Exterior Angles

$-\frac{1}{7}$

n; Corresponding Angles

Point-slope Form

$\angle 6$ & $\angle 4$ *are supplementary*; Same Side Interior Angles

$\overline{AD}$ & $\overline{DE}$

Alternate Interior Angles

Neither

ABC & DEF

Perpendicular

Transversal

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$y = \frac{2}{3}x - 2$

$\angle 4 \cong \angle 5$; Alternate Interior Angles

$\frac{5}{3}$

$y - 0 = 2(x - 1)$ or $y = 2(x - 1)$