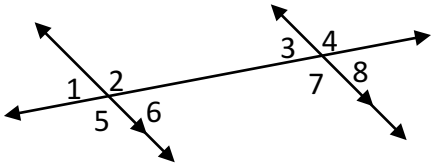
Name:_____Date:_____

Test 4 Review

Use the figure below to complete problems #1-5.



1. Identify two pairs of alternate interior angles.

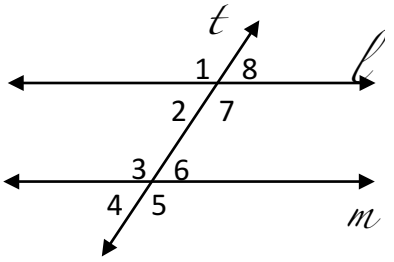
2. Identify two pairs of alternate exterior angles.

3. Identify two pairs of consecutive interior angles.

4. Identify four pairs of corresponding angles.

5. Identify four pairs of vertical angles.

6. In the accompanying diagram, line ℓ is parallel to line m, and line t is a transversal. Name a pair of supplementary angles.



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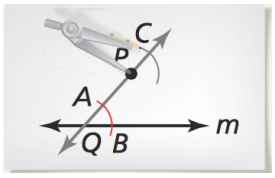
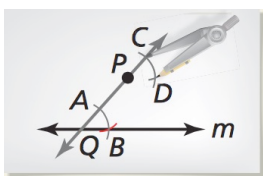
7. The pictures below illustrate the steps to construct a parallel line.

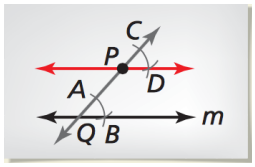
1



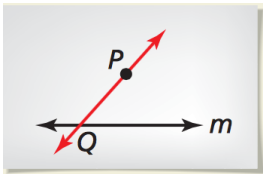
2



3

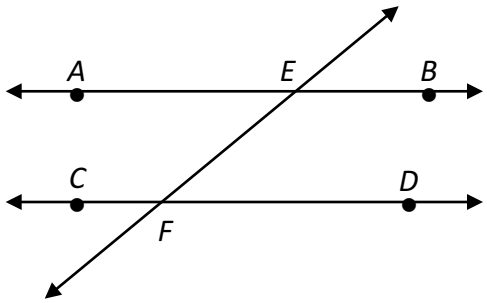


4

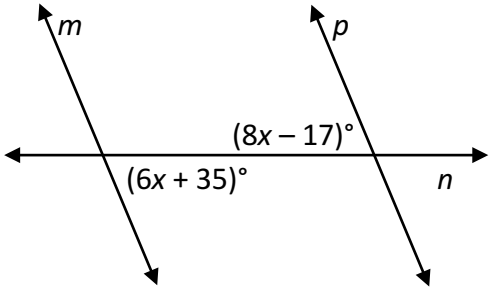


In what order should they be placed to construct a line parallel to a given line?

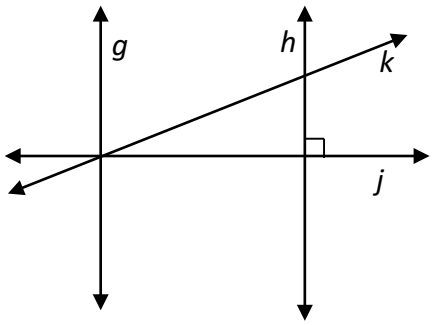
8. In the figure below, parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are cut by transversal $\overleftrightarrow{EF}$. If m∠*CFE* = 135°, what is m∠*FEB*?



9. Line *n* intersects line *m* and *p*, forming the angles shown in the diagram below. Which value of *x* would prove *m* ∥ *p*?



10. Line *g* is parallel to line *h* in the figure shown below. Which statement about the lines is true?



A) Line *h* is parallel to line *k*.
B) Line *j* is perpendicular to line *g*.
C) Line *k* is parallel to line *j*.
D) Line *g* is perpendicular to line *h*.

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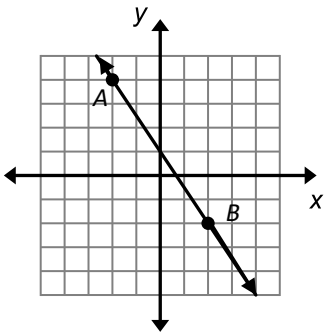
11. If the slope of a straight line is **undefined**, the graph of this line may pass through Quadrants A) I and II B) I and III C) I and IV D) II and IV	12. In the diagram shown, what is the slope of $\overleftrightarrow{AB}$? 
13. Which is an equation of the line that passes through the point (7, –3) and has a slope of –2?	14. Write the equation of a line that is parallel to the line whose equation is $y = \frac{2}{3}x + 1$ and goes through the point (3, 1).
15. Which equation represents a line that is parallel to the line whose equation is $3y = -2x + 6$	16. Which is an equation of a line perpendicular to the line that goes through the point (3, –1) and whose equati`on is $y = -3x + 7$?

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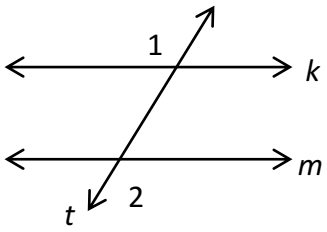
17. Fill in the blank with the appropriate reason.

Given: k ∥ m
Prove: ∠1 ≅ ∠2

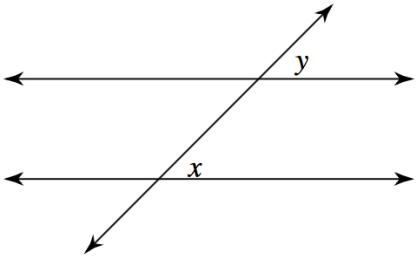


Statements	Reasons
1. k ∥ m	1. Given
2. ∠1 ≅ ∠2	2. _____

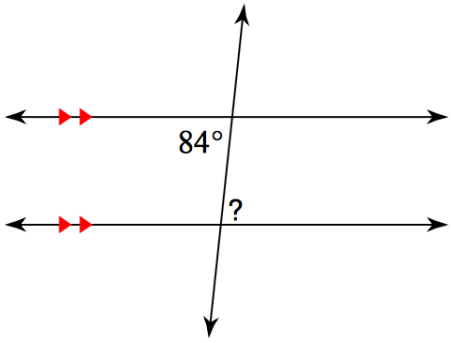
A) Alternate interior angles theorem
B) Same-side interior angles theorem
C) Corresponding angles postulate
D) Alternate exterior angles theorem

18. What is the slope of the line whose equation is $5x-4y=10$?

19. Identify this pair of angles as corresponding, alternate interior, alternate exterior, or consecutive interior.



20. Find the measure of the indicated angle.



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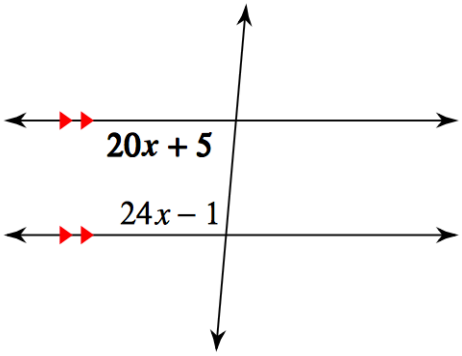
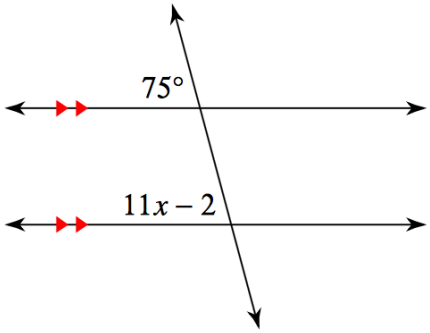
21. Solve for x.



22. Solve for x.



23. Find the slope.

$$y = -\frac{17}{38}x - 4$$

24. Find the slope of the line through the pair of points.

$(-15, -4), (10, 14)$

25. Tell whether the lines through the given points are parallel, perpendicular, or neither. Justify your answer.

Line 1: $(2.5, -2), (9.5, 12)$

Line 2: $(-4, -2), (8, -4)$

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For 26 & 27, write the slope-intercept form of the equation of the line described.

26. through: (1, -3), parallel to $y = 4x + 3$	27. through: (2, -4), perpendicular to $y = \frac{1}{6}x + 2$