

1-4. Write the equation of each of the following lines in the form stated.

1. (6, 0) (5, -3); **slope-intercept form**

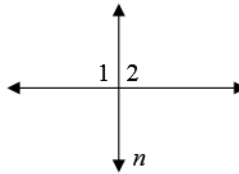
2. $m = \frac{3}{4}$, (8, 4); **point-slope form**

3. Write the equation of a line perpendicular to $y = \frac{2}{3}x - 4$ that passes through the point (4, 2) ; **slope-intercept form**

4. Write the equation of a line parallel to $x + 2y = 14$ that passes through the point (-6,5); **Point-slope form**

5. Given: $m\angle 1 = m\angle 2$

Prove: $l \perp n$



Statements	Reasons
1. $m\angle 1 = m\angle 2$	1. Given
2.	2. Linear Pair Postulate
3. $m\angle 1 + m\angle 1 = 180^\circ$	3.
4. $2(m\angle 1) = 180^\circ$	4. Simplify
5.	5. Division Property of equality
6. $\angle 1$ is a right angle	6.
7. $l \perp n$	7.

6-7. Name the following terms being defined (It might help to draw a picture).

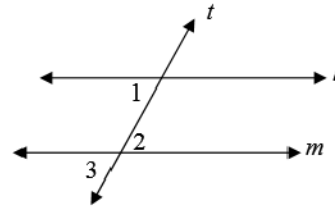
6. Two lines in the same plane that do not intersect _____

7. Two non-adjacent interior angles on the same side of the transversal _____

8. Complete the proof for the Alternate Interior Angles Theorem.

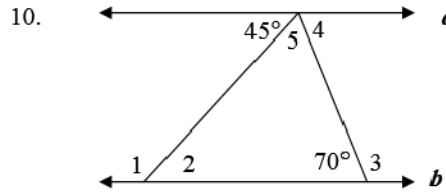
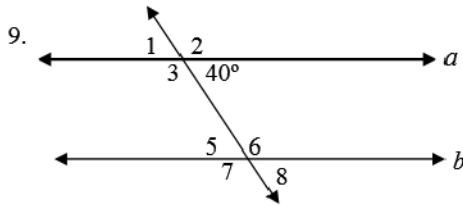
Given: $l \parallel m$

Prove: $m\angle 1 = m\angle 2$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

9-10. Find the missing angles for each problem, given that lines a and b are parallel.



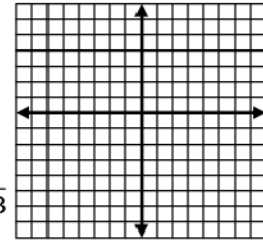
In problems 11 – 14, use A (-1,4) and B (3,7) to find:

11. \overline{AB}

12. The slope of \overline{AB}

13. The midpoint of \overline{AB}

14. The slope of any line parallel to \overline{AB}



Use for #11-14 if needed

15-17. Determine which lines, if any, are parallel given the listed information. Explain your answer. Consider each problem independently.

15. $\angle 3$ and $\angle 4$ are supplementary

16. $\angle 1$ and $\angle 13$ are supplementary

17. $m\angle 2 = m\angle 7$

