

Name:

Date:

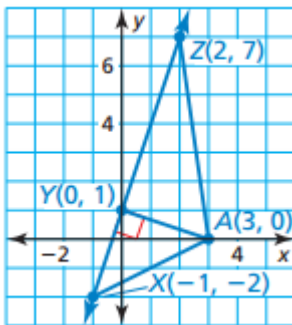
Period:

HW #3-12: Test Review

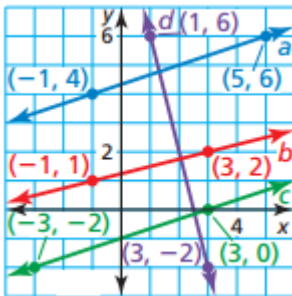
- Each rung of the ladder is parallel to the rung directly above it. Explain why the top rung is parallel to the bottom rung.



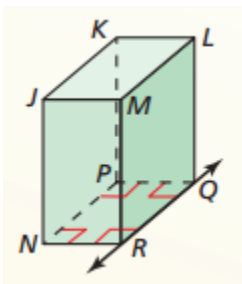
- Find the shortest distance from point A to $\overleftrightarrow{XZ}$.



- Determine which lines are parallel and which line are perpendicular.

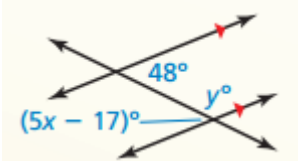


- Think of each segment in the figure as a line. Which line(s) or plane(s) appear to fit the description?

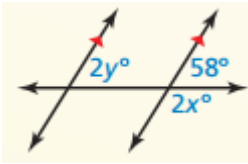


- line(s) perpendicular to $\overleftrightarrow{QR}$
- Line(s) skew to $\overleftrightarrow{QR}$
- Line(s) parallel to $\overleftrightarrow{QR}$
- Plane(s) parallel to plane LMQ

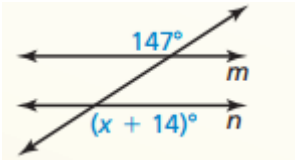
- Find the values of x and y.



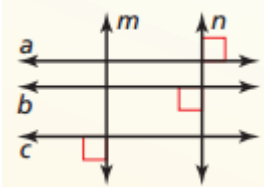
6. Find the values of x and y .



7. Find the value of x that makes $m \parallel n$.



8. Determine which lines, if any, must be parallel.



9. Write an equation of the line passing through the given point that is parallel to the given line.

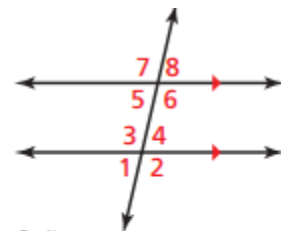
$A(3, -1) \dots y = \frac{1}{3}x + 10$

10. Write an equation of the line passing through the given point that is perpendicular to the given line.

$A(-1, 5) \dots y = \frac{1}{7}x + 4$

11. Select the angle that makes the statement true.

- a. $\angle 4 \cong \underline{\hspace{1cm}}$ by the Alternate Interior Angles Theorem (Thm. 3.2).
- b. $\angle 2 \cong \underline{\hspace{1cm}}$ by the Corresponding Angles Theorem (Thm. 3.1).
- c. $\angle 1 \cong \underline{\hspace{1cm}}$ by the Alternate Exterior Angles Theorem (Thm. 3.3).
- d. $m\angle 6 + m \underline{\hspace{1cm}} = 180^\circ$ by the Consecutive Interior Angles Theorem (Thm. 3.4).



$\angle 1$

$\angle 2$

$\angle 3$

$\angle 4$

$\angle 5$

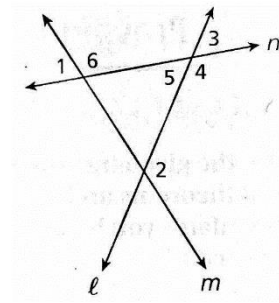
$\angle 6$

$\angle 7$

$\angle 8$

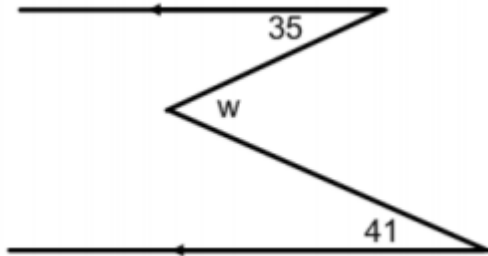
12. Identify the transversal and classify each angle pair

- a. $\angle 5$ and $\angle 2$
- b. $\angle 6$ and $\angle 3$
- c. $\angle 2$ and $\angle 4$
- d. $\angle 1$ and $\angle 2$

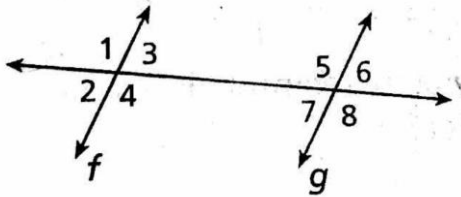


13. Use the slope formula to find the slope of the line: A(-3, 2), B(4, 1)

14. Solve for w.



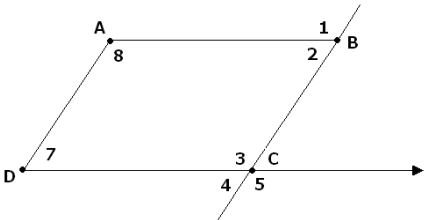
15. In the diagram, $m\angle 4 = 110^\circ$ and $f \parallel g$. Identify three numbered angles that have a measure of 124° .



16. Complete the two-column proof.

Given: $\angle 1 \cong \angle 5$

Prove: $m\angle 7 + m\angle 8 = 180^\circ$

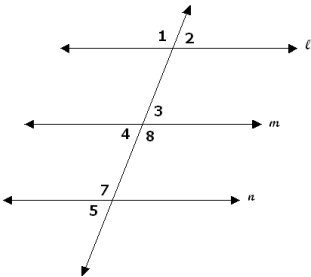


Statements	Reasons
1. $\angle 1 \cong \angle 5$	1. Given
2.	2.
3. $m\angle 7 + m\angle 8 = 180^\circ$	3.

17. Complete the two-column proof.

Given: $l \parallel m$ and $\angle 2 \cong \angle 5$

Prove: $\angle 5$ and $\angle 8$ are supplementary



Statements	Reasons
1. $\angle 2 \cong \angle 5$	1. Given
2.	2.
3. $l \parallel m$	3.
4.	4. transitive property of parallel lines
5. $\angle 5$ and $\angle 8$ are supplementary	5.