

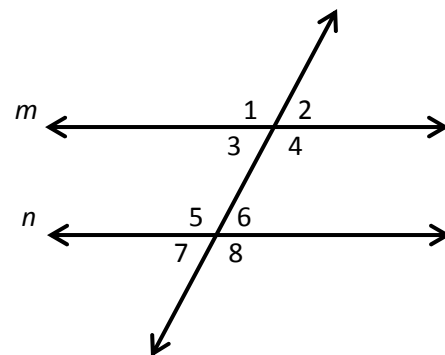
Name Key

Date _____

Parallel Lines and Transversals

Fill in the blank

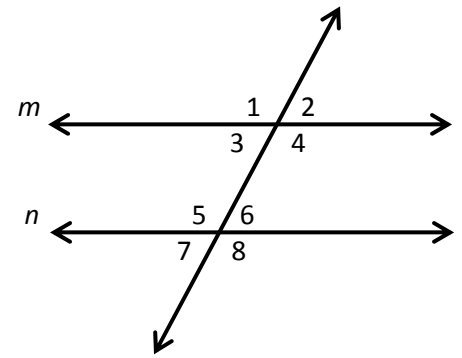
- 1) Transversal: A line that intersects two lines at two different points.
- 2) Parallel lines are lines that never intersect.
- 3) $\angle 1$ and $\angle 8$ are Alternating Exterior Angles.
- 4) $\angle 1$ and $\angle 4$ are Vertical Angles.
- 5) $\angle 2$ and $\angle 6$ are Corresponding Angles.
- 6) $\angle 3$ and $\angle 6$ are Alternating Interior Angles.



Determine the angle measure of each given angle (Justify your answers with: Vertical, Linear Pair, Corresponding, Alternating Interior, or Alternating Exterior Angles).

- 7) $m\angle 1 = 110^\circ$, $m\angle 4 =$ 110° Reason: Vertical Angles
- 8) $m\angle 2 = 40^\circ$, $m\angle 6 =$ 40° Reason: Corresponding Angles
- 9) $m\angle 7 = 60^\circ$, $m\angle 3 =$ 60° Reason: Corresponding Angles
- 10) $m\angle 8 = 125^\circ$, $m\angle 1 =$ 125° Reason: Alternating Exterior Angles
- 11) $m\angle 6 = 35^\circ$, $m\angle 5 =$ 145° Reason: Linear Pair
- 12) $m\angle 4 = 112^\circ$, $m\angle 5 =$ 112° Reason: Alternating Interior Angles
- 13) $m\angle 1 = 105^\circ$, $m\angle 6 =$ 75° Reason(s): $m\angle 5 = 105^\circ$ (Corr Ang), $m\angle 6 = 75^\circ$ (Linear Pair)
- 14) $m\angle 7 = 24^\circ$, $m\angle 1 =$ 156° Reason(s): $m\angle 2 = 24^\circ$ (Alt Ext Ang), $m\angle 1 = 156^\circ$ (Linear Pair)

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- 15) Find the missing angle using Corresponding angles as one of your reasons.

$m\angle 7 = 68^\circ$, $m\angle 4 = \underline{112^\circ}$ Reason(s): $m\angle 8 = 112^\circ$ (Lin Pair), $m\angle 4 = 112^\circ$ (Corr Ang)

- 16) Find the missing angle using Alternating Interior Angles as one of your reasons.

$m\angle 3 = 75^\circ$, $m\angle 8 = \underline{105^\circ}$ Reason(s): $m\angle 6 = 75^\circ$ (Alt Int Ang), $m\angle 8 = 105^\circ$ (Linear Pair)

- 17) Find the missing angle using Alternating Exterior Angles as one of your reasons.
(This may take more than 2 steps)

$m\angle 3 = 28^\circ$, $m\angle 1 = \underline{152^\circ}$ Reason(s): $m\angle 6 = 28^\circ$ (Alt Int Ang), $m\angle 8 = 152^\circ$ (Linear Pair)

$m\angle 1 = 152^\circ$ (Alt Ext Ang)

- 18) Find the missing angle using Vertical Angles as one of your reasons.
(This may take more than 2 steps)

$m\angle 7 = 73^\circ$, $m\angle 1 = \underline{107^\circ}$ Reason(s): $m\angle 6 = 73^\circ$ (Vert Ang), $m\angle 2 = 73^\circ$ (Corr Ang)

$m\angle 1 = 107^\circ$ (Linear Pair)