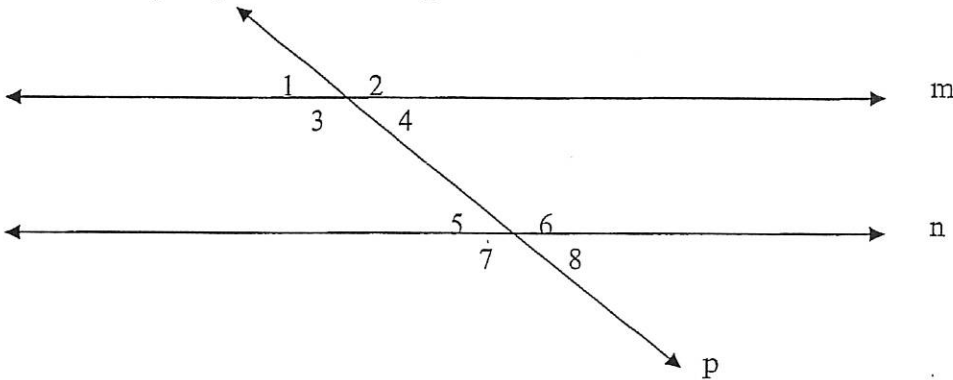


3.1 Missing Angles

Aim: How do we find a missing angle when 2 parallel lines are cut by a transversal?

Use the following diagram to answer questions # 1 - 12



1. Give the measure of each angle if $m\angle 1 = 105^\circ$

$\angle 2 = \underline{\hspace{2cm}}$ $\angle 3 = \underline{\hspace{2cm}}$ $\angle 4 = \underline{\hspace{2cm}}$ $\angle 5 = \underline{\hspace{2cm}}$ $\angle 6 = \underline{\hspace{2cm}}$ $\angle 7 = \underline{\hspace{2cm}}$ $\angle 8 = \underline{\hspace{2cm}}$

2. Give the measure of each angle if $m\angle 3 = 80^\circ$

$\angle 1 = \underline{\hspace{2cm}}$ $\angle 2 = \underline{\hspace{2cm}}$ $\angle 4 = \underline{\hspace{2cm}}$ $\angle 5 = \underline{\hspace{2cm}}$ $\angle 6 = \underline{\hspace{2cm}}$ $\angle 7 = \underline{\hspace{2cm}}$ $\angle 8 = \underline{\hspace{2cm}}$

3. Give the measure of each angle if $m\angle 8 = 150^\circ$

$\angle 1 = \underline{\hspace{2cm}}$ $\angle 2 = \underline{\hspace{2cm}}$ $\angle 3 = \underline{\hspace{2cm}}$ $\angle 4 = \underline{\hspace{2cm}}$ $\angle 5 = \underline{\hspace{2cm}}$ $\angle 6 = \underline{\hspace{2cm}}$ $\angle 7 = \underline{\hspace{2cm}}$

4. Give the measure of each angle if $m\angle 6 = 75^\circ$

$\angle 1 = \underline{\hspace{2cm}}$ $\angle 2 = \underline{\hspace{2cm}}$ $\angle 3 = \underline{\hspace{2cm}}$ $\angle 4 = \underline{\hspace{2cm}}$ $\angle 5 = \underline{\hspace{2cm}}$ $\angle 7 = \underline{\hspace{2cm}}$ $\angle 8 = \underline{\hspace{2cm}}$

5. If $m\angle 4 = 95^\circ$, find $m\angle 6$

9. If $m\angle 5 = 117^\circ$, find $m\angle 8$

6. If $m\angle 3 = 120^\circ$, find $m\angle 6$

10. If $m\angle 5 = 122^\circ$, find $m\angle 7$

7. If $m\angle 8 = 132^\circ$, find $m\angle 1$

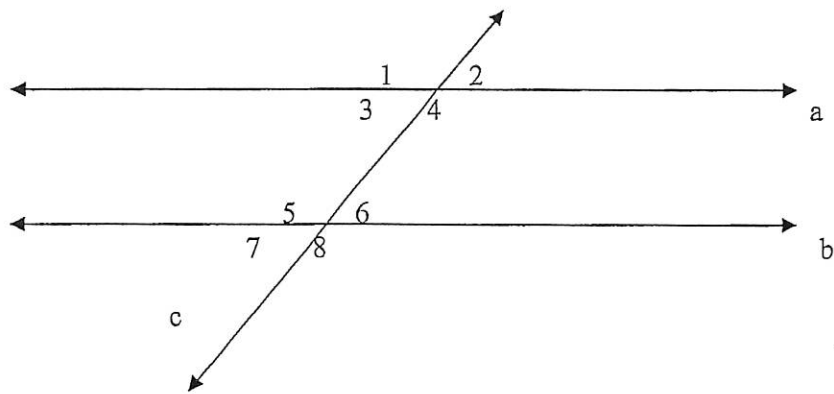
11. If $m\angle 2 = 73^\circ$, find $m\angle 3$

8. If $m\angle 1 = 112^\circ$, find $m\angle 5$

12. If $m\angle 6 = 82^\circ$, find $m\angle 7$

Aim: How do we find a missing angle algebraically?
Warm Up:

Use the diagram below to answer questions #1-6



Solve Algebraically!

1. If $m\angle 4 = 5x + 10$ and $m\angle 8 = x + 30$, solve for x

2. If $m\angle 3 : m\angle 4 = 4 : 5$, solve for x

3. If $m\angle 1 = 3x + 20$ and $m\angle 2 = x + 40$, find $m\angle 2$

4. If $m\angle 4 : m\angle 2 = 7 : 3$, find $m\angle 2$

5. If $m\angle 6 = 5x - 10$ and $m\angle 7 = 2x + 20$, find $m\angle 5$

6. If $m\angle 2 = 5x + 10$ and $m\angle 6 = 2x + 40$, find $m\angle 7$