# Angle Pairs Created by Parallel Lines Cut by a Transversal
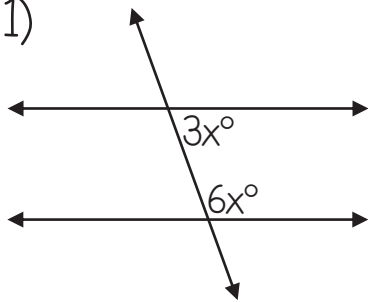
For each set of angles name the angle pair, write the equation, solve the equation for x, and plug in x to find the missing angle measurements

1)

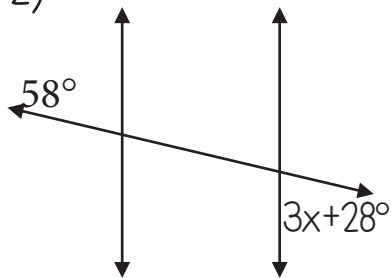3x°
6x°

Type of angle pair _____

These angles are _____

Equation _____

x=_____

Angle Measurements= _____

*Show your work*

2)

58°
3x+28°

Type of angle pair _____

These angles are _____

Equation _____

x=_____

Angle Measurements= _____

*Show your work*

3)

3x+77°
4x+54°

Type of angle pair _____
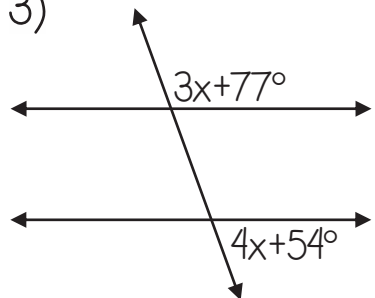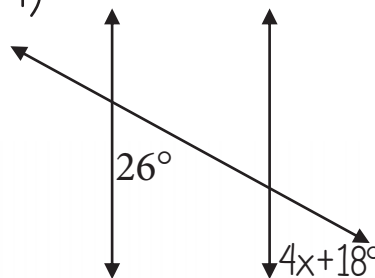
These angles are _____

Equation _____

x=_____

Angle Measurements= _____

*Show your work*

4)

26°
4x+18°

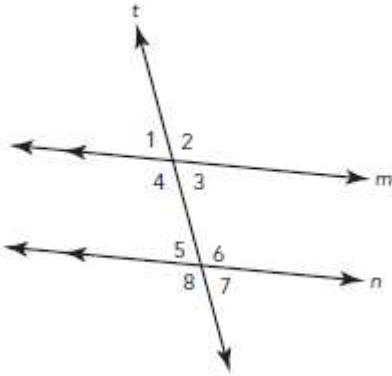Type of angle pair _____

These angles are _____

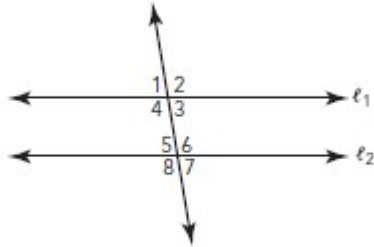Equation _____

x=_____

Angle Measurements= _____

*Show your work*

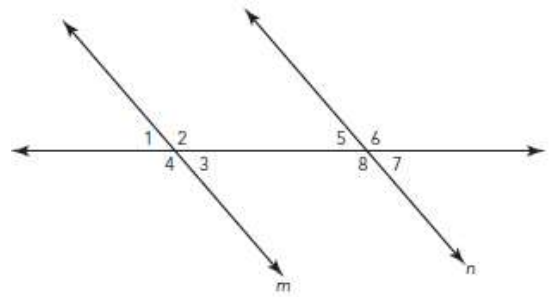| 4 | In the diagram, transversal t intersects parallel lines m and n. Suppose that the measure of $\angle 4$ is $106^0$. **Classify** the given angle pair. Then determine **each measure**. |
|---|---|



a. $\angle 4$ and $\angle 1$ _____ $m\angle 1 =$ _____

b. $\angle 4$ and $\angle 2$ _____ $m\angle 2 =$ _____

c. $\angle 4$ and $\angle 3$ _____ $m\angle 3 =$ _____

d. $\angle 4$ and $\angle 8$ _____ $m\angle 8 =$ _____

e. $\angle 4$ and $\angle 5$ _____ $m\angle 5 =$ _____

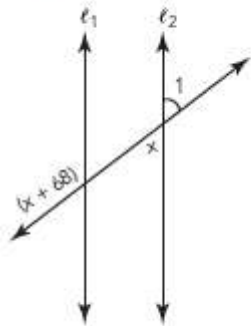f. $\angle 5$ and $\angle 7$ _____ $m\angle 7 =$ _____

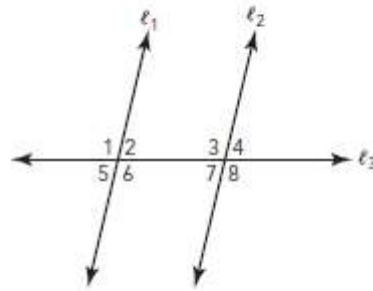| 5 | In the figure shown, $\ell 1 \| \ell 2$. If $m\angle 8= 49°$, determine the measures of the other seven angles in the figure. | 6 | In the figure shown, m\|\|n. If $m\angle 6 = 17x + 16$ and $m\angle 3 = 28º$, determine the measures of the other seven angles in the figure. |
|---|---|---|---|

| 7 | In the figure shown, $\ell_1 \| \ell_2$. | 8 | In the figure shown, lines 1 and 2 are parallel. |
|---|---|---|---|

What is $m\angle 1$?

The sum of the measures of angles 4 and 5 is 150°. What is the measure of angle 1?

| 9 | Determine the measure of the missing angle. | 10 | Determine the measure of the missing angles. |
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