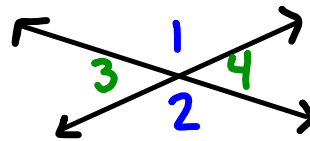


2.4 Vertical Angles

Objective: Recognize and find the measures of angles formed by intersecting lines.

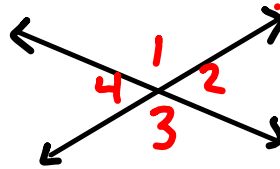
Two angles are vertical angles if they are not adjacent and their sides are formed by two intersecting lines.



$\angle 1$ and $\angle 2$

$\angle 3$ and $\angle 4$

Two adjacent angles are a linear pair if their noncommon sides are on the same line.



$\angle 1$ and $\angle 2$

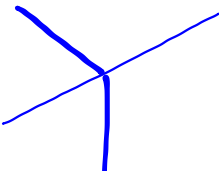
$\angle 3$ and $\angle 4$

$\angle 1$ and $\angle 4$

$\angle 2$ and $\angle 3$

Example 1: pg. 75

1. linear pair

2.  neither

3. vertical angles

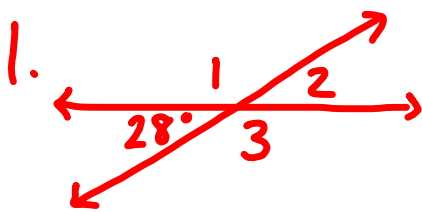
Linear Pair Postulate: If two angles form a linear pair, then they are supplementary.

$$? + ? = 180$$

Vertical Angles Theorem: Vertical angles are congruent.



Example 2: Checkpoint in the middle of pg. 77



$$\angle 2 = 28^\circ$$

$$\begin{array}{r} 28^\circ + ? = 180^\circ \\ -28 \qquad \qquad -28 \end{array}$$

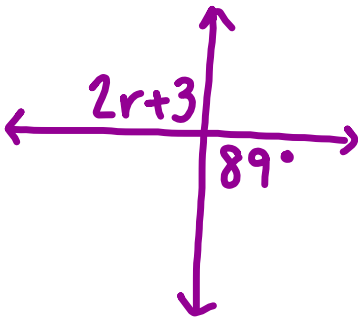
$$\angle 1 = 152^\circ = \angle 3$$

2. $\angle 2 = 124^\circ$

$$\begin{array}{r} 124^\circ + \angle 1 = 180 \\ -124 \qquad \qquad -124 \end{array}$$

$$\angle 1 = 56^\circ = \angle 3$$

Example 3: Checkpoint on the bottom of pg. 77

4. 

$$2r + 3 = 89$$

$$\frac{2r}{2} = \frac{86}{2}$$

$$r = 43$$

$$5. \quad 3x = 2x + 16$$

$$\quad -2x \quad -2x$$

$$x = 16$$

$$6. \quad 20t + 5 + 15t = 180$$

$$35t + 5 = 180$$

$$\frac{35t}{35} = \frac{175}{35}$$

$$t = 5$$

Name

2.4

pg. 78-81 # 1-27

28-50 even

51-56

59

Notes 2.5