Section 1.5 Angle Relationships
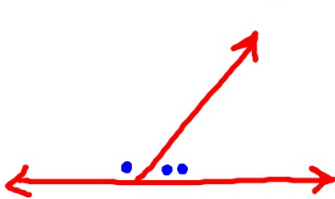
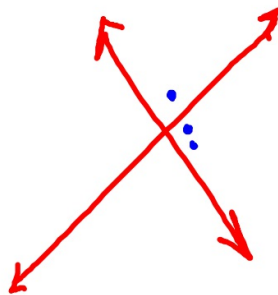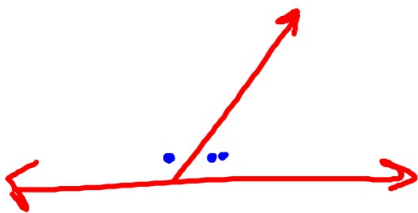**Complementary Angles:** Angles add up to 90 degrees
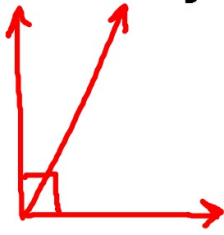
$$\_\_ + \_\_ = 90$$

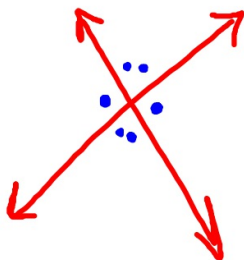**Supplementary Angles:** Angles add up to 180 degrees
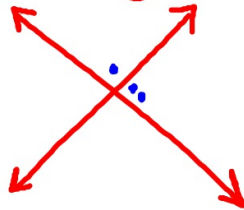
$$\_\_ + \_\_ = 180$$

Adjacent Angles: Angles that are next to each other

Linear Pair: Adjacent angles that add up to 180 degrees

$$\_\_ + \_\_ = 180$$
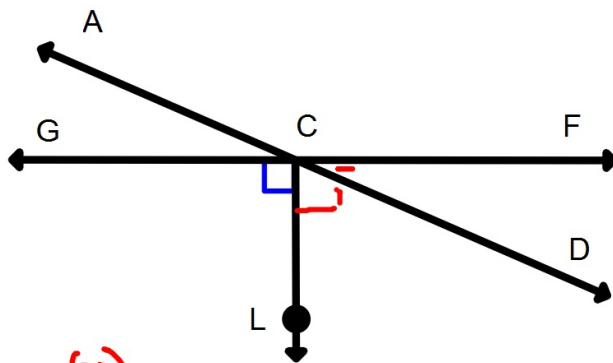
Vertical Angles: Angles that are ≅

$$\_\_ = \_\_$$

A
G   C   F
D
L

(2)   **(90)**

1. Name a pair of complementary angles.

∠FCD, ∠DCL

(180)

2. Name a pair of supplementary angles.

∠GCA, ∠ACF

3. Name a pair of acute vertical angles.
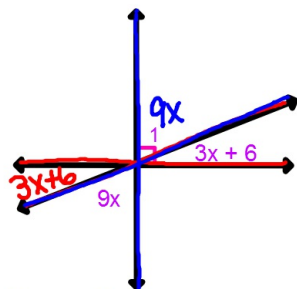
∠ACG, ∠FCD

4. Name a linear pair.

∠GCA, ∠ACF

---

5. Find the measures of two supplementary angles if the measure of one angle is 6 less than five times the measure of the other angle.

$1^{st}: x = \boxed{31}$

$2^{nd}: 5x - 6 = 5(31) - 6$
$= \boxed{149}$

$\underline{x} + \underline{5x-6} = 180$

$x = 31$

6. Find the m∠1

9x
1
3x + 6
3x+6
9x

$\underline{9x} + \underline{3x+6} = 90$

$x = 7$

$m∠1 = 9(7)$

$\boxed{m∠1 = 63}$

7. With the given angle measure of 50°, find the following:

a.) complement **(90)**

40°

b.) supplement: **(180)**

130°

c.) vertical: (≅)

50°