Angle Pair Relationships HW Day 2   Name _____
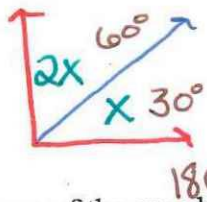
Using algebra, solve each of the following. Remember to show work for credit and circle your answers.
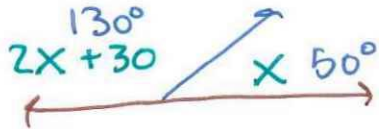
Examples

a. The measure of one angle is twice the measure of its complement. Find the measures of both angles.

$$90°$$

$$2x + x = 90$$
$$3x = 90$$
$$x = 30°$$

b. The measure of the supplement of an angle is 30 more than twice the measure of the angle. Find the measure of the angles.

$$2x + 30 + x = 180$$
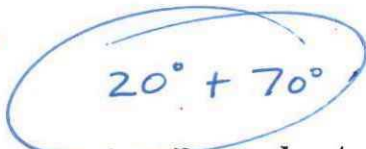$$3x + 30 = 180$$
$$-30 \quad -30$$
$$\frac{3x}{3} = \frac{150}{3} \quad X = 50$$

c. The measure of the ~~supplement~~ **complement** of an angle is 30 more than twice the measure of the angle. Find the measures of the angles.
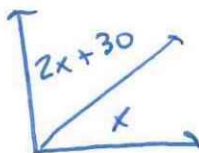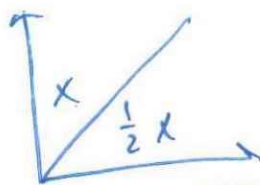
$$2x + 30 + x = 90$$
$$3x + 30 = 90$$
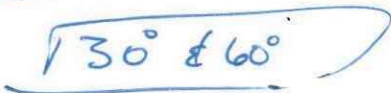$$3x = 60$$
$$x = 20°$$

$$\boxed{20° + 70°}$$

Using algebra, solve each of the following. Remember to show work for credit and circle your answers.

1. Find the measure of an angle that is half the measure of its complement.

$$x + .5x = 90$$
$$1.5x = 90$$
$$x = 60°$$

$$\underline{30° \& 60°}$$

2. The measure of one angle is eight times the measure of its supplement. Find the measures of the angles.

$$8x + x = 180$$
$$9x = 180$$
$$x = 20$$

$$160° \& 20°$$