Angle Worksheets (Word Problems)

1. The measure of a complement of an angle is 32° more than three times the angle. Find the two angles.

2. In a pair of complementary angles, the measurement of the larger angle is three times that of the smaller angle.
Find the measurements of the two angles.

3. The ratio of the measurement of an angle to its complement is 1:2. Find the angle and its complement.

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1. The measure of a complement of an angle is 32° more than three times the angle. Find the two angles.

$$x + (3x + 32) = 90$$
$$4x + 32 - 32 = 90 - 32$$
$$4x = 58$$
$$\left(\frac{1}{4}\right) 4x = \left(\frac{1}{4}\right) 58$$
$$x = 14.5$$

Angle 1 = 14.5°
Angle 2 = 3(14.5)° + 32° = 75.5°

2. In a pair of complementary angles, the measurement of the larger angle is three times that of the smaller angle.
Find the measurements of the two angles.

$$x + 3x = 90$$
$$4x = 90$$
$$\left(\frac{1}{4}\right) 4x = \left(\frac{1}{4}\right) 90$$
$$x = 22.5$$

Angle 1 = 1(22.5°) = 22.5°
Angle 2 = 3(22.5°) = 67.5°

3. The ratio of the measurement of an angle to its complement is 1:2. Find the angle and its complement.

$$x + 2x = 90$$
$$3x = 90$$
$$\left(\frac{1}{3}\right) 3x = \left(\frac{1}{3}\right) 90$$
$$x = 30$$

Angle = 30°

Complement = 2(30)° = 60°

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