Angle Worksheets (Word Problems)

1. The measures of two supplementary angles are in the ratio of 2:3. Find the two angles.

2. The supplement of the measurement of an angle is 16° less than three times the angle. Find the angle and its supplement.

3. The measure of a supplement of an angle is 6° more than twice the measure of the angle. Find the two angles.

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1. The measures of two supplementary angles are in the ratio of 2:3. Find the two angles.

$$2x + 3x = 180$$
$$5x = 180$$
$$\left(\frac{1}{5}\right)5x = \left(\frac{1}{5}\right)180$$
$$x = 36$$

Angle 1 $= 2(36°) = 72°$
Angle 2 $= 3(36°) = 108°$

2. The supplement of the measurement of an angle is 16° less than three times the angle. Find the angle and its supplement.

$$x + (3x - 16) = 180$$
$$4x - 16 + 16 = 180 + 16$$
$$4x = 196$$
$$\left(\frac{1}{4}\right)4x = \left(\frac{1}{4}\right)196$$
$$x = 49$$

Angle $= 49°$

Supplement $= 3(49°) - 16° = 131°$

3. The measure of a supplement of an angle is 6° more than twice the measure of the angle. Find the two angles.

$$x + (2x + 6) = 180$$
$$3x + 6 = 180$$
$$3x + 6 - 6 = 180 - 6$$
$$3x = 174$$
$$\left(\frac{1}{3}\right)3x = \left(\frac{1}{3}\right)174$$
$$x = 58$$

Angle 1 $= 58°$
Angle 2 $= 2(58°) + 6° = 122°$

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