

Angle Word Problems Worksheets

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

2. The ratio of the measurement of an angle to its supplement is 3: 5. Find the measurement of the angle and its supplement.

3. Let x represent the measurement of an acute angle in degrees. The ratio of the complement of x to the supplement of x is 2: 5. Guess and check to determine the value of x . Explain why your answer is correct.

Angle Word Problems Worksheets

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

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

$$\text{Angle} = 30^\circ$$

$$\text{Complement} = 2(30)^\circ = 60^\circ$$

2. The ratio of the measurement of an angle to its supplement is 3: 5. Find the measurement of the angle and its supplement.

$$\begin{aligned}3x + 5x &= 180 \\8x &= 180 \\ \left(\frac{1}{8}\right) 8x &= \left(\frac{1}{8}\right) 180 \\x &= 22.5\end{aligned}$$

$$\text{Angle} = 3(22.5)^\circ = 67.5^\circ$$

$$\text{Supplement} = 5(22.5)^\circ = 112.5^\circ$$

3. Let x represent the measurement of an acute angle in degrees. The ratio of the complement of x to the supplement of x is 2: 5. Guess and check to determine the value of x . Explain why your answer is correct.

Solutions will vary; $x = 30^\circ$.

The complement of 30° is 60° .

The supplement of 30° is 150° .

The ratio of 60 to 150 is equivalent to 2: 5