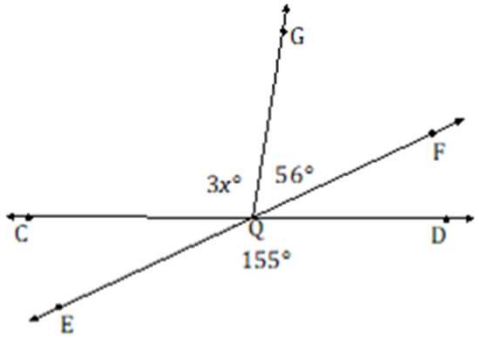
Angle Word Problems Worksheets

1. Find the measure of $\angle CQG$.

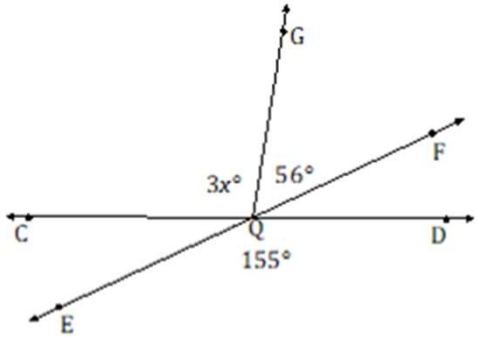


2. The ratio of the measures of a pair of adjacent angles on a line is $4:5$. Find the measures of the two angles.

3. The ratio of the measures of three adjacent angles on a line is $3:4:5$. Find the measures of the three angles.

Angle Word Problems Worksheets

1. Find the measure of $\angle CQG$.



$\angle DQE$ and $\angle CQF$ are vertical angles and are of equal measurement. $\angle CQG$ and $\angle GQF$ are adjacent angles and their measures sum to the measure of $\angle CQF$

$$3x + 56 = 155$$
$$3x + 56 - 56 = 155 - 56$$
$$3x = 99$$
$$\left(\frac{1}{3}\right)3x = \left(\frac{1}{3}\right)99$$
$$x = 33$$
$$m\angle CQG = 3(33°) = 99°$$

2. The ratio of the measures of a pair of adjacent angles on a line is $4:5$. Find the measures of the two angles.

$$\angle 1 = 4x, \angle 2 = 5x$$

$$4x + 5x = 180$$
$$9x = 180$$
$$\left(\frac{1}{9}\right)9x = \left(\frac{1}{9}\right)180$$
$$x = 20$$

$$\angle 1 = 4(20°) = 80°$$

$$\angle 2 = 5(20°) = 100°$$

3. The ratio of the measures of three adjacent angles on a line is $3:4:5$. Find the measures of the three angles.

$$\angle 1 = 3x, \angle 2 = 4x, \angle 3 = 5x$$

$$3x + 4x + 5x = 180$$
$$12x = 180$$
$$\left(\frac{1}{12}\right)12x = \left(\frac{1}{12}\right)180$$
$$x = 15$$

$$\angle 1 = 3(15°) = 45°$$

$$\angle 2 = 4(15°) = 60°$$

$$\angle 3 = 5(15°) = 75°$$