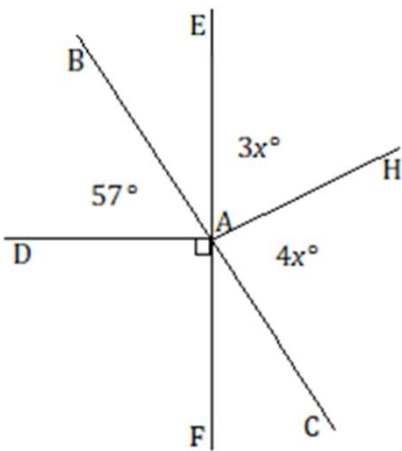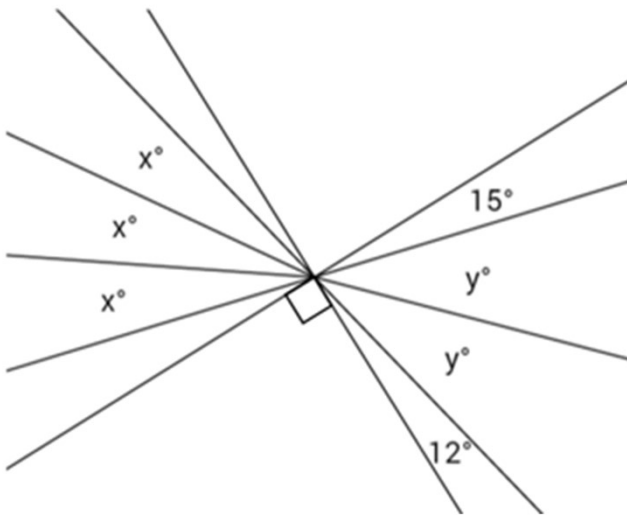# Angle Word Problems Worksheets

1. Set up and solve an equation to find the value of x. Find the measurements of $\angle EAH$ and $\angle HAC$.

2. Set up and solve an equation to find the values of x and y.

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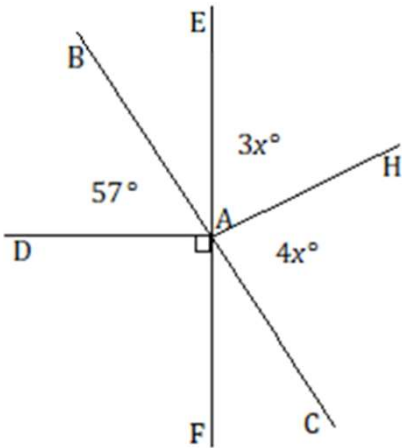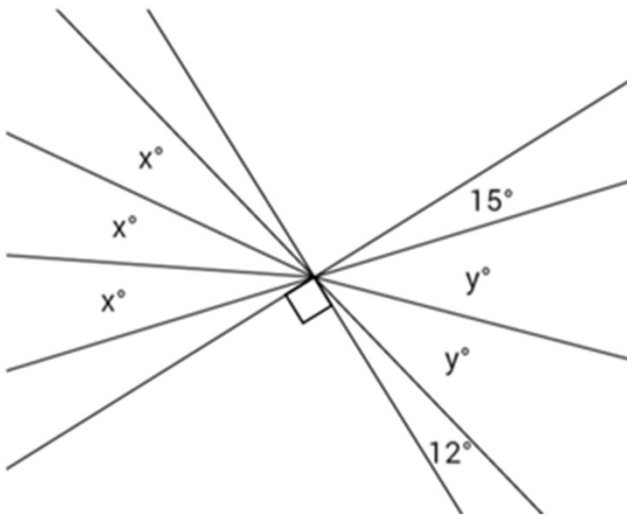

$$\angle BAE + 57 = 90$$
$$\angle BAE + 57 - 57 = 90 - 57$$
$$\angle BAE = 33$$

$$\angle BAE + 3x + 4x = 180$$
$$33 + 3x + 4x = 180$$
$$33 + 7x = 180$$
$$33 - 33 + 7x = 180 - 33$$
$$7x = 147 \left(\frac{1}{7}\right) 7x = \left(\frac{1}{7}\right) 147$$
$$x = 21$$

The measurement of $\angle EAH$: $3(21)° = 63°$

The measurement of $\angle HAC$: $4(21)° = 84°$

2. Set up and solve an equation to find the values of x and y.

$$2y + 12 + 15 + 90 = 180$$
$$2y + 117 = 180$$
$$2y + 117 - 117 = 180 - 117$$
$$2y = 63$$
$$\left(\frac{1}{2}\right) 2y = \left(\frac{1}{2}\right) 63$$
$$y = 31.5$$

$$3x = 2y$$
$$3x = 2(31.5)$$
$$3x = 63 \left(\frac{1}{3}\right)$$
$$3x = \left(\frac{1}{3}\right) 63$$
$$x = 21$$

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