

Quadratic Word Problems Worksheet Answers

1. Two consecutive integers have a product of 72. What are the two integers ?

$$x(x+1) = 72$$

$$x^2 + x = 72$$

$$x^2 + x - 72 = 0$$

$$(x+9)(x-8) = 0$$

$$x = -9 \text{ and } x = 8$$

**Integers are 8 and 9**

2. Two integers have a sum of 5 and a product of six. Find the two integers.

$$(5-y)(y) = 6$$

$$xy = 6 \quad 5y - y^2 = 6$$

$$x + y = 5 \quad 0 = y^2 - 5y + 6$$

$$x = 5 - y \quad 0 = (y-2)(y-3)$$

$$y = 2, y = 3$$

**Integers are 2 and 3**

3. Two negative integers have a sum of  $-10$  and a product of 24. Find the two integers.

$$(x)(-10-x) = 24$$

$$xy = 24 \quad -10x - x^2 = 24$$

$$x + y = -10 \quad 0 = x^2 + 10x + 24$$

$$y = -10 - x \quad 0 = (x+4)(x+6)$$

$$x = -4, x = -6$$

**Integers are  $(-4)$  and  $(-6)$**