Quadratic Word Problems Worksheet Answers

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

$x(x+1)=72$

$x^2+x=72$

$x^2+x-72=0$

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

$x=-9$ 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.

$xy=6$

$x+y=5$

$x=5-y$

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

$5y-y^2=6$

$0=y^2-5y+6$

$0=(y-2)(y-3)$

$y=2, y=3$

Integers are 2 and 3

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

$xy=24$

$x+y=-10$

$y=-10-x$

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

$-10x-x^2=24$

$0=x^2+10x+24$

$0=(x+4)(x+6)$

$x=-4, x=-6$

Integers are (– 4) and (– 6)