

Factoring Quadratics Part 2

Name _____
Date _____

1. If my quadratic is of the form $ax^2 - bx + c$, will my factors be a positive and a negative, two negatives, or two positives? Why?

Both factors will be negative numbers. My "c" term is positive, meaning that my factors could both be positive or both negative. My "b" term is negative, so my factors would have to be negative.

2. If my quadratic is of the form $ax^2 - bx - c$, will my factors be a positive and a negative, two negatives, or two positives? Why?

One factor will be positive, and the other negative. Only a positive times a negative factor could have a negative product, and c is negative.

3. If my quadratic is of the form $ax^2 + bx - c$, will my factors be a positive and a negative, two negatives, or two positives? Why?

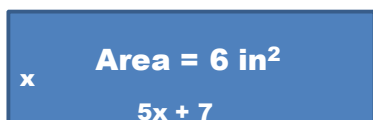
One factor will be positive, and the other negative. Only a positive times a negative factor could have a negative product, and c is negative.

4. Factor these Quadratics:

Quadratic	Factor	Factor	Factor
$-x^2 + x + 20$	$(x - 5)$	$(x + 4)$	(-1)
$2c^2 - 7c + 3$	$(2c - 1)$	$(c - 3)$	
$6x^2 - x - 5$	$(6x + 5)$	$(x - 1)$	
$4a^2 + 9a - 9$	$(4a - 3)$	$(a + 3)$	
$-6m^2 - 13m - 6$	$(3m + 2)$	$(2m + 3)$	(-1)
$4a^2 + 16a + 15$	$(2a + 5)$	$(2a + 3)$	
$6y^2 - 5y - 4$	$(3y - 4)$	$(2y + 1)$	

5. What is the value of x?

$\frac{3}{5}$



6. The product of two consecutive integers is 210. What are the numbers?

14 and 15

7. The product of two consecutive odd integers is equal to 30 more than the first. Find the integers.

5 and 7

8. The Profit, P, in dollars, gained by selling x computers is modeled by the equation $P = -x^2 + 200x + 1000$. How many computers need to be sold to make a profit of \$11,000.

100

