Calendar Math

Basic Form: Quadratic $f(x) = a(x - h)^2 + k$

a: Vertical stretch/shrink

$|a| > 1$ vertical stretch

$|a| < 1$ vertical shrink

h: Horizontal Shift

(x - h) moves to the right

(x + h) moves to the left

k: Vertical Shift

+ k moves up

- k moves down

Reflection: Negative in front of a reflects the graph over the x-axis

Absolute Value: $f(x) = a|x - h| + k$

Square Root: $f(x) = \sqrt{x - h} + k$

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1.3 Basic Factoring

Always look for the GCF FIRST

$$5x^2 + 10x + 25$$

$$5(x^2 + 2x + 5)$$

1. $b^2 + 5b - 24$

$(b-3)(b+8)$

$b^2 + 8b$
$-3b + -24$
$b^2 + 5b - 24$

-24

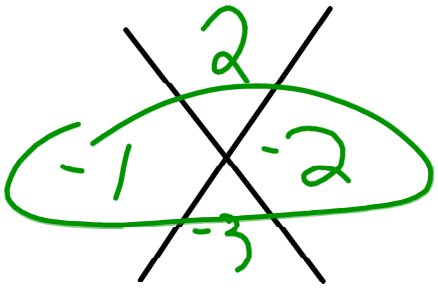
-3 8

5

1, 24, 2, 12, 3, 8, 4, 6 (3, 8)

2. $1x^2 - 3x + 2$

$(x-1)(x-2)$



1, 2

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12. $5b^4 + 5b^3 - 450b^2$

$5b^2(b^2 + b - 90)$

$5b^2(b - 9)(b + 10)$

1, 90 45, 2
3, 30 9, 10

-90

$-9 \quad 10$

1

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5. $n^2 - 11n + 18$

$(n - 2)(n - 9)$

18

-2×-9

-11

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