Daily Agenda

Learning Target: I can write quadratic equations from the graph of a parabola.

Homework
3.5 Formative

Assessments
Chapter Test 10/24
- Calc and No Calc

Never let the odds keep you from doing what you know in your heart you know you were meant to do.
-H. Jackson Brown, Jr.

Nov 15-8:24 PM

36×12

Kate & Friends 432
$36 \times 10 = 360$
$36 \times 2 = 72$
432

Tanner
$12 \times 10 = 120$
$\times 3$
360
$12 \times 6 = 72$
432

Will
$36 \times 3 = 108$
$\times 4$
400
32
432

Oct 17-11:02 AM

3.5 Writing Quadratic Equations

If we are given three points on the graph of a quadratic function, how do we write the equation?

Linear Systems

(1, 3)
(2, 11)
(3, 21)

$y = ax^2 + bx + c$

$3 = a + b + c$
$11 = 4a + 2b + c$
$21 = 9a + 3b + c$

$\begin{bmatrix} 1 & 1 & 1 & 3 \\ 4 & 2 & 1 & 11 \\ 9 & 3 & 1 & 21 \end{bmatrix}$

$y = x^2 - 5x + 3$

Sep 15-10:27 PM

Given the set of points on a parabola, write the equation of the quadratic function (by hand).

(1,6) (3,26) (-2, 21)

$6 = a + b + c$
$26 = 9a + 3b + c$
$21 = 4a - 2b + c$

$f(x) = 3x^2 - 2x + 5$

Oct 4-8:22 AM

Given the set of points on a parabola, write the equation of the quadratic function.

Vertex (-2,3) Point (4,12)
h k x y

$y = a(x-h)^2 + k$
$12 = a(4+2)^2 + 3$
$12 = 36a + 3$
$9 = 36a$
$\frac{1}{4} = a$

$y = \frac{1}{4}(x+2)^2 + 3$

$f(x) = .25x^2 + x + 4$

Oct 4-8:22 AM

Given the set of points on a parabola, write the equation of the quadratic function:

solutions of 2,-3 and y-intercept of -18

By Hand
$(x-2)(x+3) = 0$
$y = 3(x^2 + x - 6)$
$= 3x^2 + 3x - 18$

$y = 3(x^2 + x - 6)$
$y = 3(x+3)(x-2)$

Matrices
(2,0) $0 = 4a + 2b + c$
(-3,0) $0 = 9a - 3b + c$
(0,18) $-18 = 0a + 0b + c$

Oct 4-8:22 AM

Given the set of points on a parabola, write the equation of the quadratic function (calculator).

(0,5) (4,1) (-3, -13)

$y = -1x^2 + 3x + 5$

Oct 4-8:22 AM