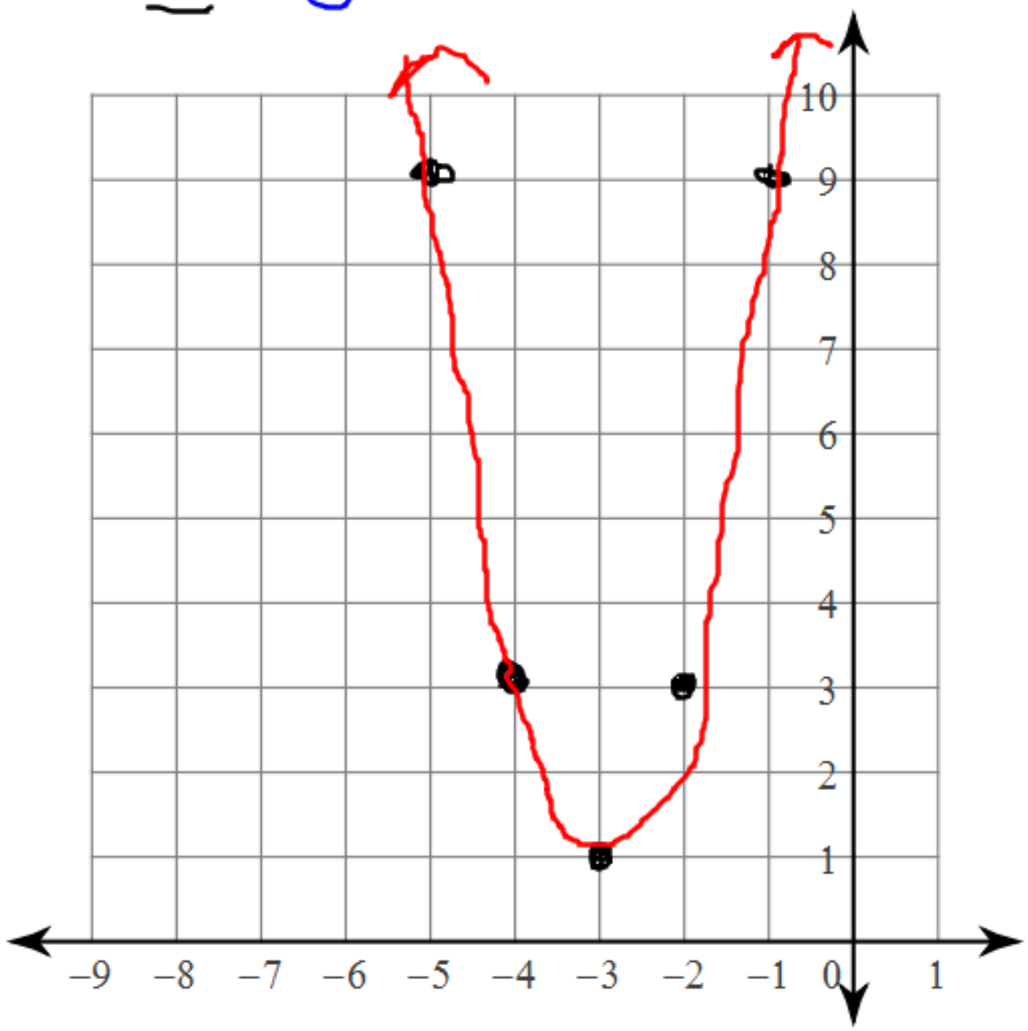
Class Presentations

Sketch the graph of each function. CHANGE TO STANDARD FORM.

Vertex $(-3, 1)$

4) $y = 2(x + 3)^2 + 1$



$y = 2(x+3)(x+3)+1$

$y = 2(x^2+6x+9)+1$

$y = 2(x^2+6x+9)+1$

$y = 2x^2+12x+18+1$

$y = 2x^2+12x+19$

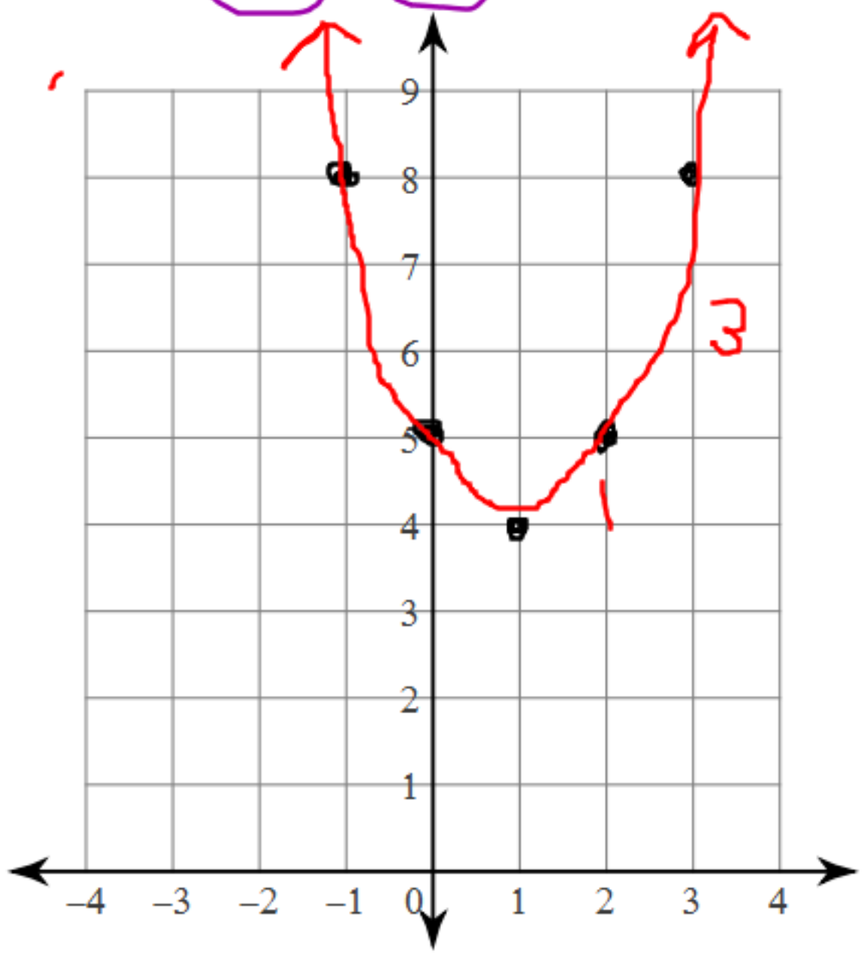
(A) 38 NO

(B) 12 ZEROS

Sketch the graph of each function. CHANGE TO STANDARD FORM.

$V = (1, 4)$

3) $y = (x - 1)^2 + 4$



$y = (x-1)(x-1) + 4$

$y = (x^2 - 2x + 1) + 4$

$y = x^2 - 2x + 1 + 4$

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

(x) 5

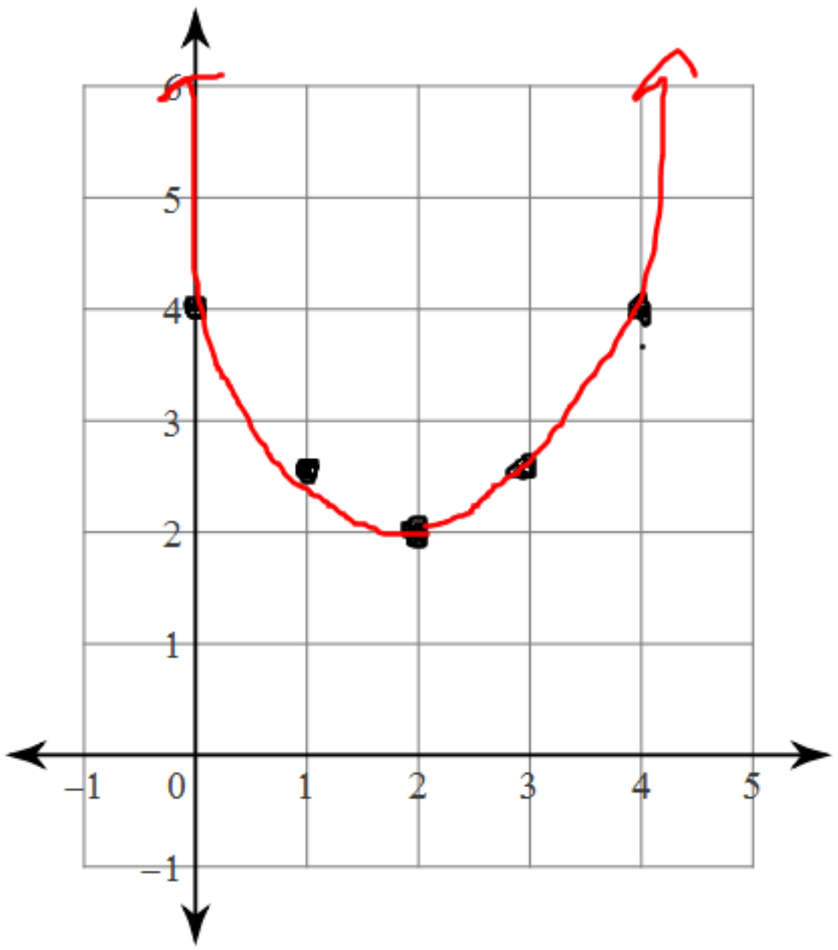
(+) -2

NO ZEROS

Sketch the graph of each function. CHANGE TO STANDARD FORM.

6) $y = \frac{1}{2}(x-2)^2 + 2$

vertex = (2, 2)



$y = \frac{1}{2}(x-2)(x-2)+2$

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

$y = \frac{1}{2}x^2 - 2x + 2 + 2$

$y = \frac{1}{2}x^2 - 2x + 4$

NO ZEROS

x 4

+ −2

1, 4

2, 2

|x .5 = .5

3x .5 = 1.5

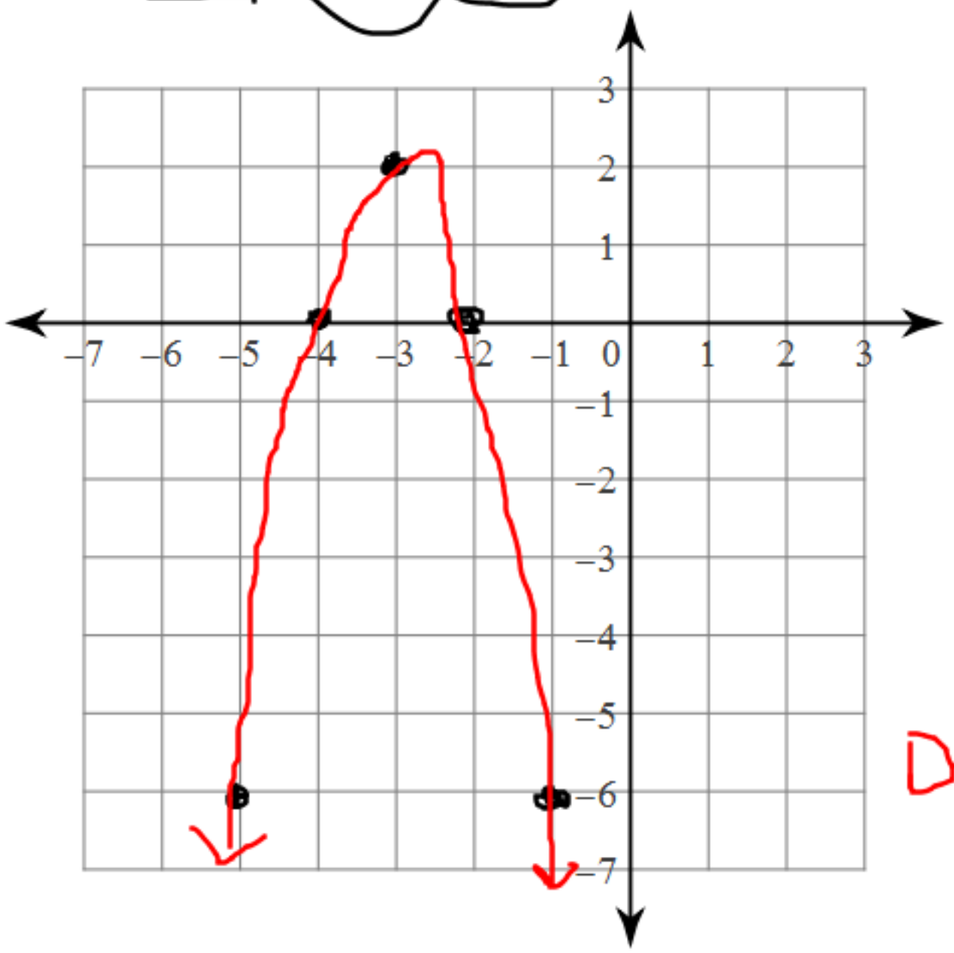
Infinite Algebra 1

Show

Sketch the graph of each function. CHANGE TO STANDARD FORM.

$V = (-3, 2)$

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



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

$y = -2(x^2 + 6x + 9) + 2$

$y = -2x^2 - 12x - 18 + 2$

$y = -2x^2 - 12x - 16$

Decomposition

$y = \frac{-2x^2}{-2x} \frac{-4x}{-2x} \frac{-8x}{-8} \frac{-16}{-8}$ ⊗ +32 ⊕ −12

−4, −8

$-2x(x+2) - 8(x+2)$

$(x+2)(-2x-8)$

$x + 2 = 0$

$x = -2$

$-2x - 8 = 0$

$+8 \quad +8$

$\frac{-2x}{-2} = \frac{8}{-2}$

$x = -4$

$S = \{-2, -4\}$

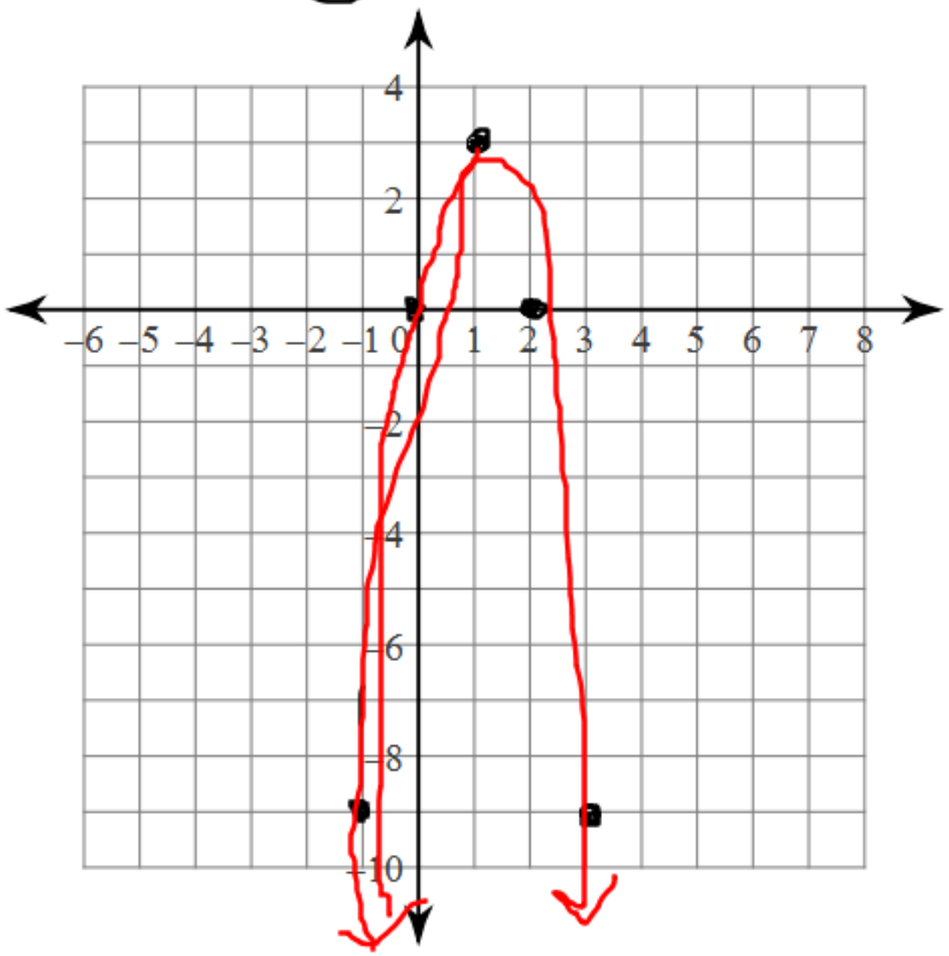
Infinite Algebra 1

Show

Sketch the graph of each function. CHANGE TO STANDARD FORM.

Vertex $(1, 3)$

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



$y = -3(x-1)(x-1)+3$

$y = -3(x^2 - 2x + 1) + 3$

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

$y = -3x^2 + 6x + 0$

$\frac{-3x^2}{-3x} + \frac{6x}{-3x}$ GCF

$= -3x(x - 2)$

$x - 2 = 0$ $\quad x = 0$

$x = 2$

$SS\{2, 0\}$