HAT

9/29/17

Chapter 4 Board Review

Write the equation of the parabola that passes through (2, -1) and has a maximum at (-3, 4).

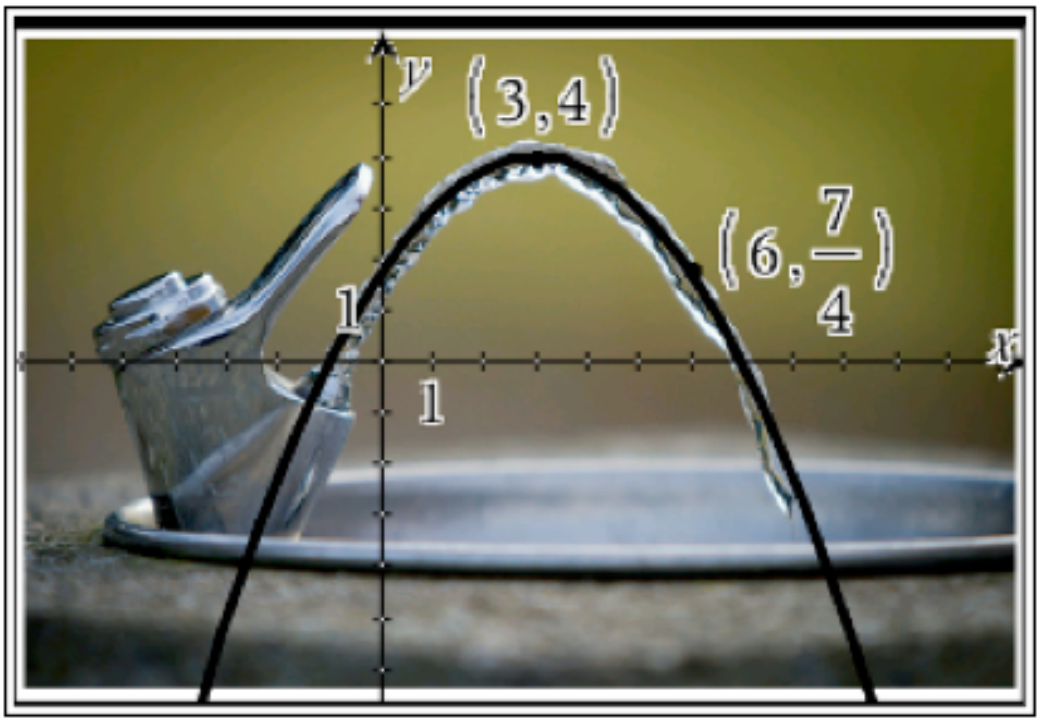
Write the equation of the parabola that has x-intercepts of (-2, 0) and (5, 0) and a y-intercept of (0, -8).

Simplify.

$$\frac{(4+2i)^2}{3-i}-(8i-3)$$

$f(x) = 6x^2 + 10x - 4$

Mrs. Long fit a parabola to the stream of water from this drinking fountain.



Write the equation of the parabola in all three forms.

Given $f(x) = x^2 + 8x + 17$

a. Find the discriminant to determine the number of x-intercepts.

b. Graph $f(x)$

c. Solve $x^2 + 8x + 17 = 0$

d. Show the solution set of $y < x^2 + 8x + 17$

Graph. Label key features.

$$f(x)=3x^2+12x-8$$

$$y=\frac{1}{2}(x+2)^2-8$$

Factor and solve the inequality.

a. $3x^2 + 4x - 32 \geq 0$

b. $9x^2 - 15x \leq 6$

$$f(x)=6x^2+10x-4$$

Factor to find the x intercepts.

Complete the square to write in vertex form.

Solve $6x^2+10x-4=0$

$6x^2+10x-4>0$

$y<6x^2+10x-4$

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