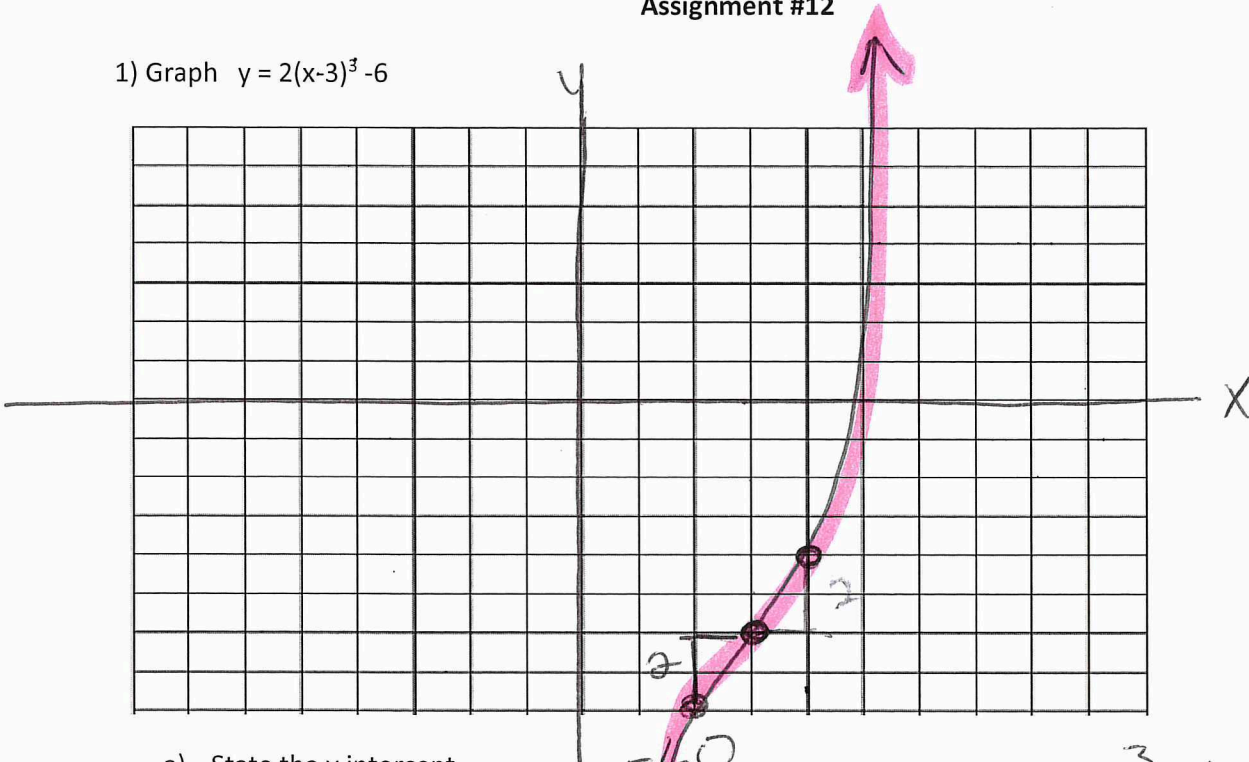


Advanced Algebra

I can analyze a graph

Assignment #12

1) Graph $y = 2(x-3)^3 - 6$



a) State the y intercept -6

b) State the x intercept (4.44, 0)

c) Does this function have a maxima or minima? If so identify them

None

c) Using proper math terminology what is the domain?

All Real #'s

d) Using Proper math terminology what is the range?

All Real

e) For what x values is f(x) increasing?

All x values Always increasing

g) For what x values is f(x) decreasing?

None

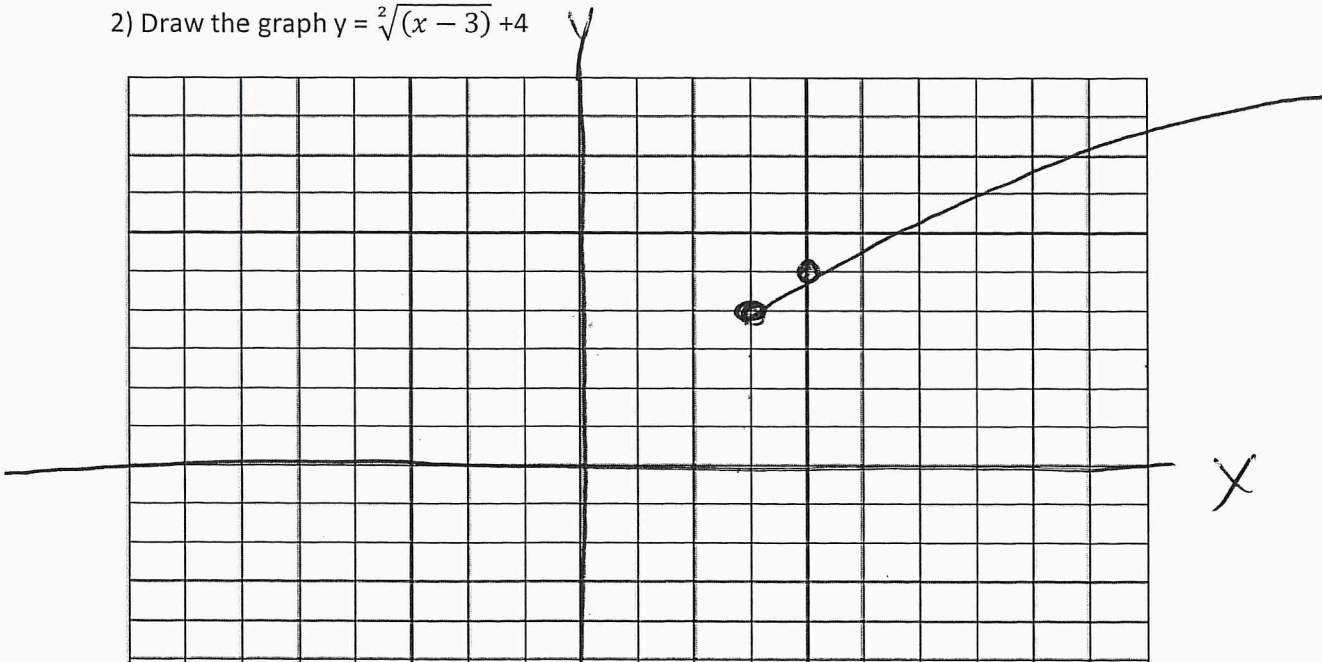
$$2(x-3)^3 - 6 = 0$$

$$(x-3)^3 = 3$$

$$x-3 = 1.44$$

$$x = 4.44$$

2) Draw the graph $y = \sqrt[2]{(x-3)} + 4$



a) State the y intercept none

b) State the x intercept none

c) Does this function have a maxima or minima? If so identify them

$(3, 4)$

d) Using proper math terminology what is the domain?

$x \geq 3$

e) Using Proper math terminology what is the range?

$y \geq 4$

f) For what x values is $f(x)$ increasing?

when $x > 3$

g) For what x values is $f(x)$ decreasing

none