

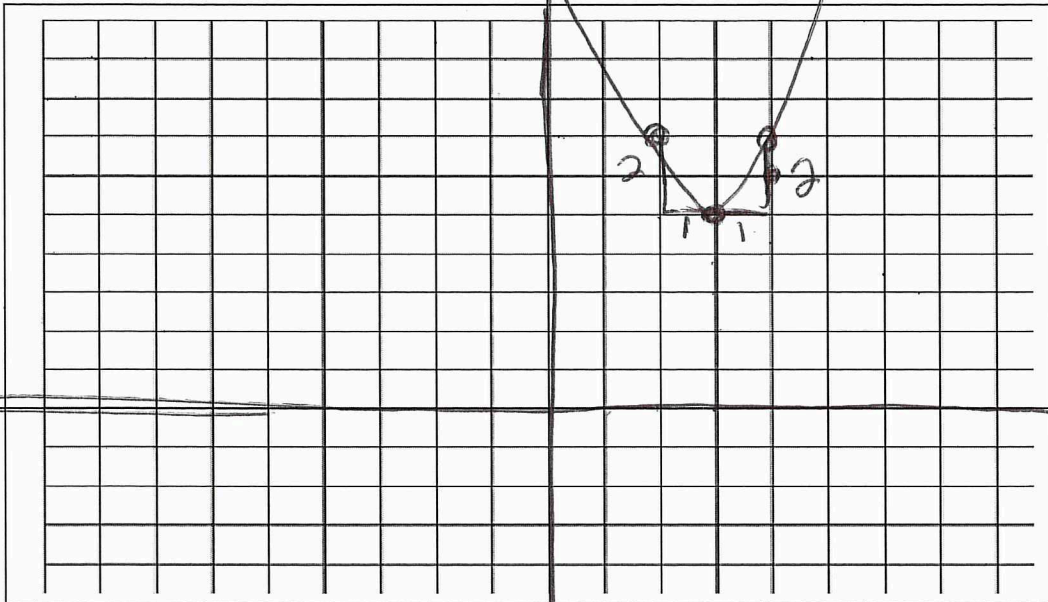
Advanced Algebra

can analyze a graph #1

Assignment #11

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

Y axis



X axis

- a) State the y intercept (0, 23)
- b) State the x intercept none
- c) Does this function have a maxima or minima? If so identify them (3, 5)

d) Using proper math terminology what is the domain? All Real #'s

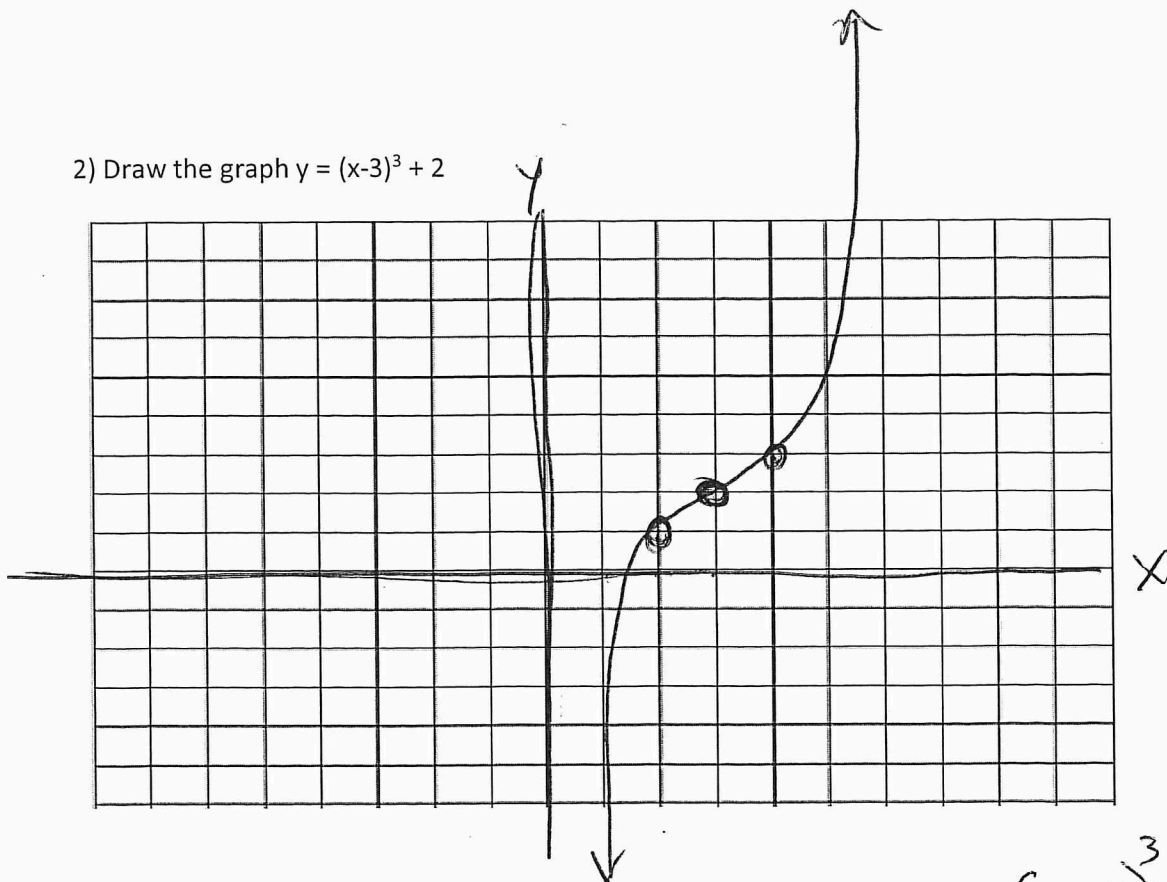
e) Using Proper math terminology what is the range?  $y \geq 5$

f) For what x values is f(x) increasing? when  $x > 3$

g) For what x values is f(x) decreasing?  
 $-\infty < x < 3$

j) What is f(2)  
 $f(2) = 7$

2) Draw the graph  $y = (x-3)^3 + 2$



a) State the y intercept -25

b) State the x intercept (1.74, 0)

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

none

d) Using proper math terminology what is the domain?

All Real #'s

e) Using Proper math terminology what is the range?

All Real #'s

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

All x values Always Increasing

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

none

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

$$x = 1.74$$