

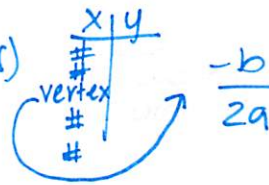
Solving Quadratic Inequalities by Graphing

• Use Solid line for: \geq, \leq

Use Dashed line for: $>, <$

10 Graph:

- 1) Graph the quadratic. (make a table of values)
- 2) Draw using solid or dashed line
- 3) Shade correct side (use a test point)

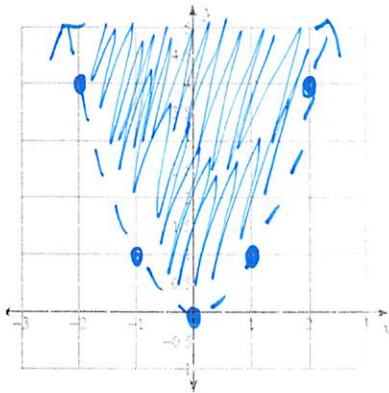


Examples:

1) $y > x^2 + 0x + 0$

$$\frac{-b}{2a}$$

$$\frac{0}{2(1)}$$



x	y
-2	4
-1	1
0	0
1	1
2	4

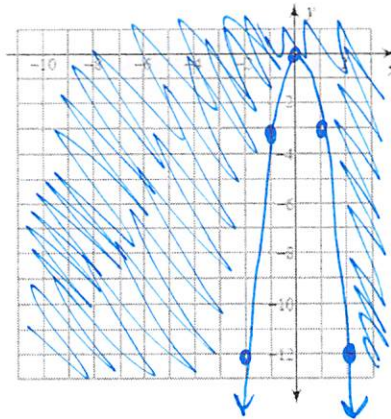
(0, 1)

$$1 > (0)^2$$

$$1 > 0 \text{ - TRUE}$$

2) $y \geq -3x^2 + 0x + 0$

$$\frac{0}{2(-3)}$$



x	y
-2	-12
-1	-3
0	0
1	-3
2	-12

(0, -1)

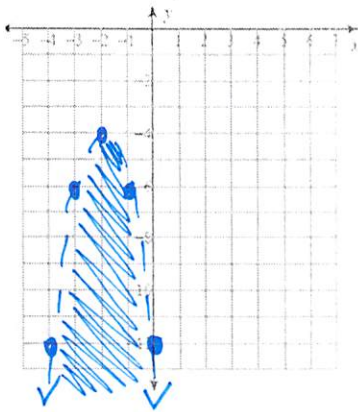
$$-1 \geq 3(0)^2$$

$$-1 \geq 0$$

False

3) $y < -2x^2 - 8x - 12$

$$\frac{8}{2(-2)}$$



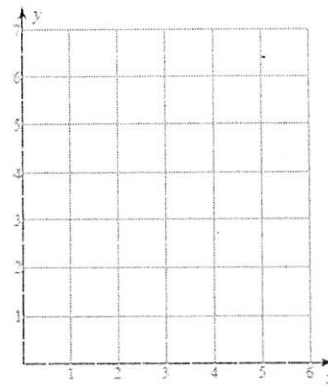
x	y
-4	-12
-3	-6
-2	-4
-1	-6
0	-12

(0, 0)

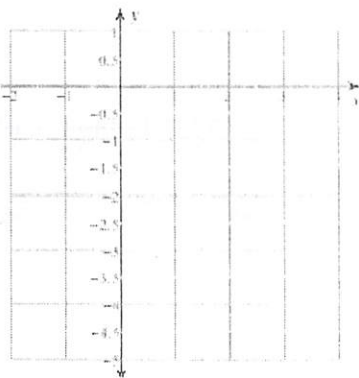
$$0 < -2(0)^2 - 8(0) - 12$$

$$0 < -12 \text{ False}$$

4) $y \leq x^2 - 6x + 11$



5) $y \leq -x^2$



6) $y > -x^2 + 4x - 6$

