Sec 3.1 Quadratics
- Graphing-

1. Plot vertex
2. Determine and plot y-intercept
3. Determine orientation
4. Use symmetry to plot a 3rd point

Express domain and range, if asked, in interval notation.

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

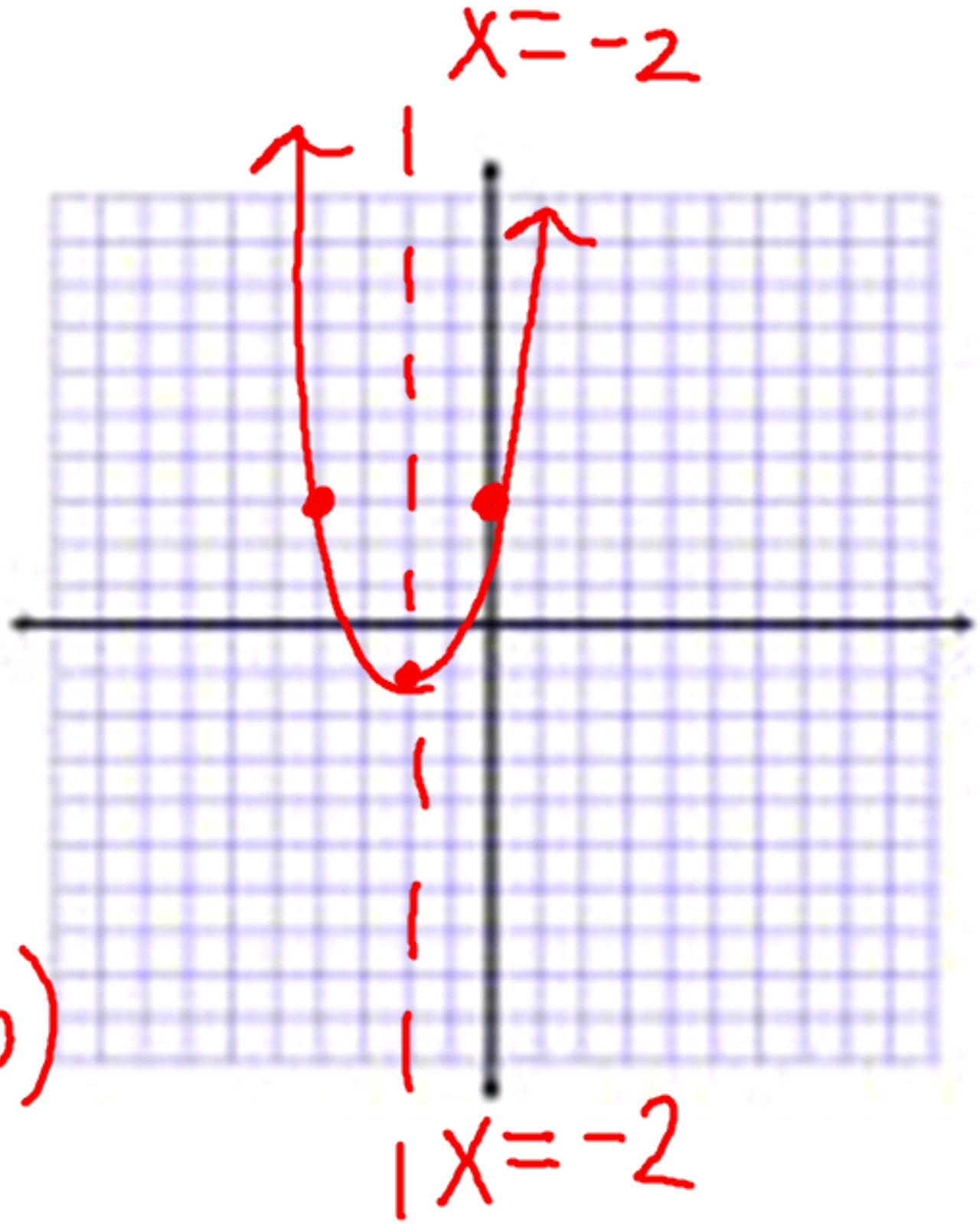
v (−2, −1)

y − int

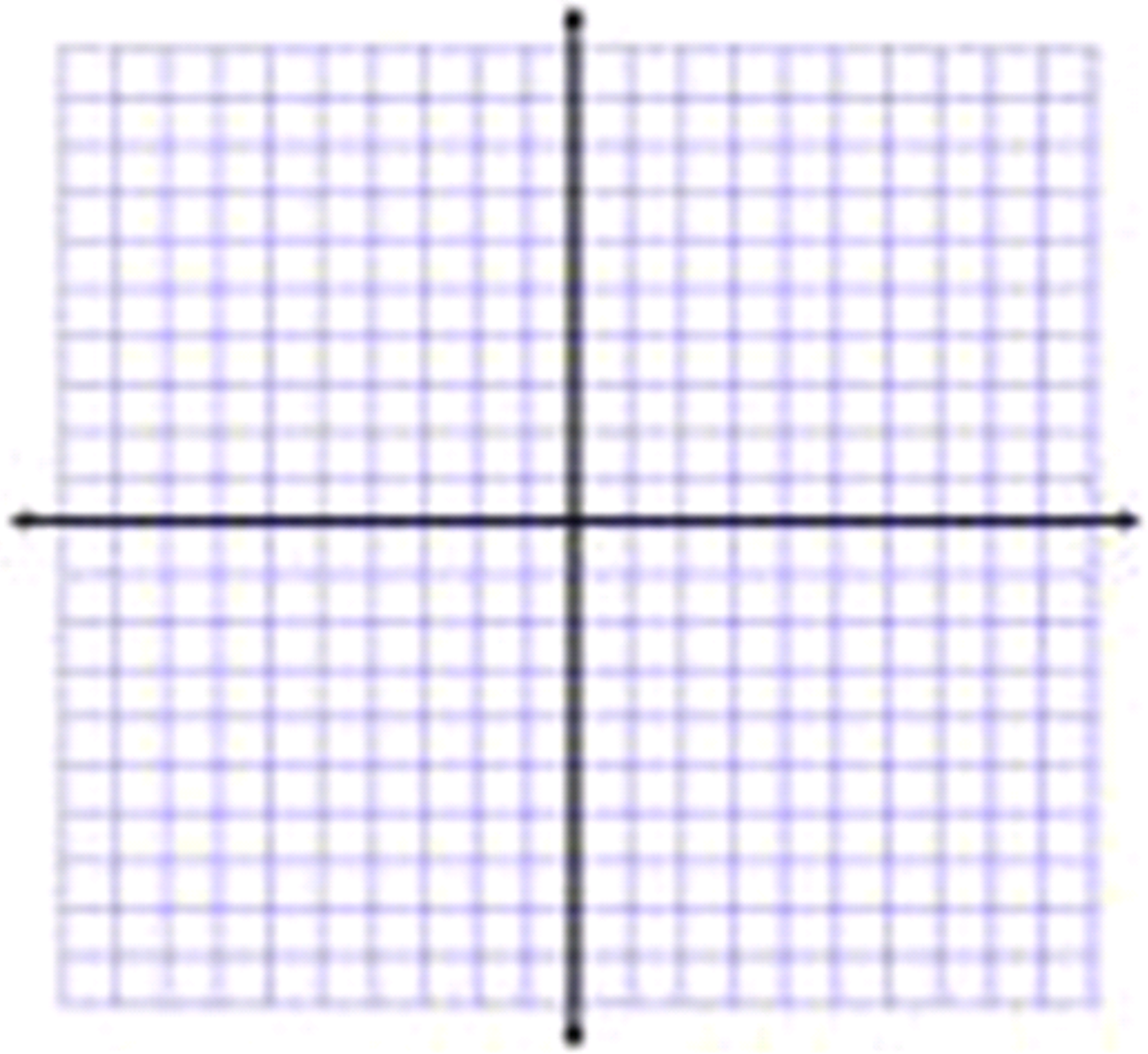
(0, 3)

d: ℝ

r: [−1, ∞)



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



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

$V(2,-2)$

y-int:

$-2(0-2)^2-2$

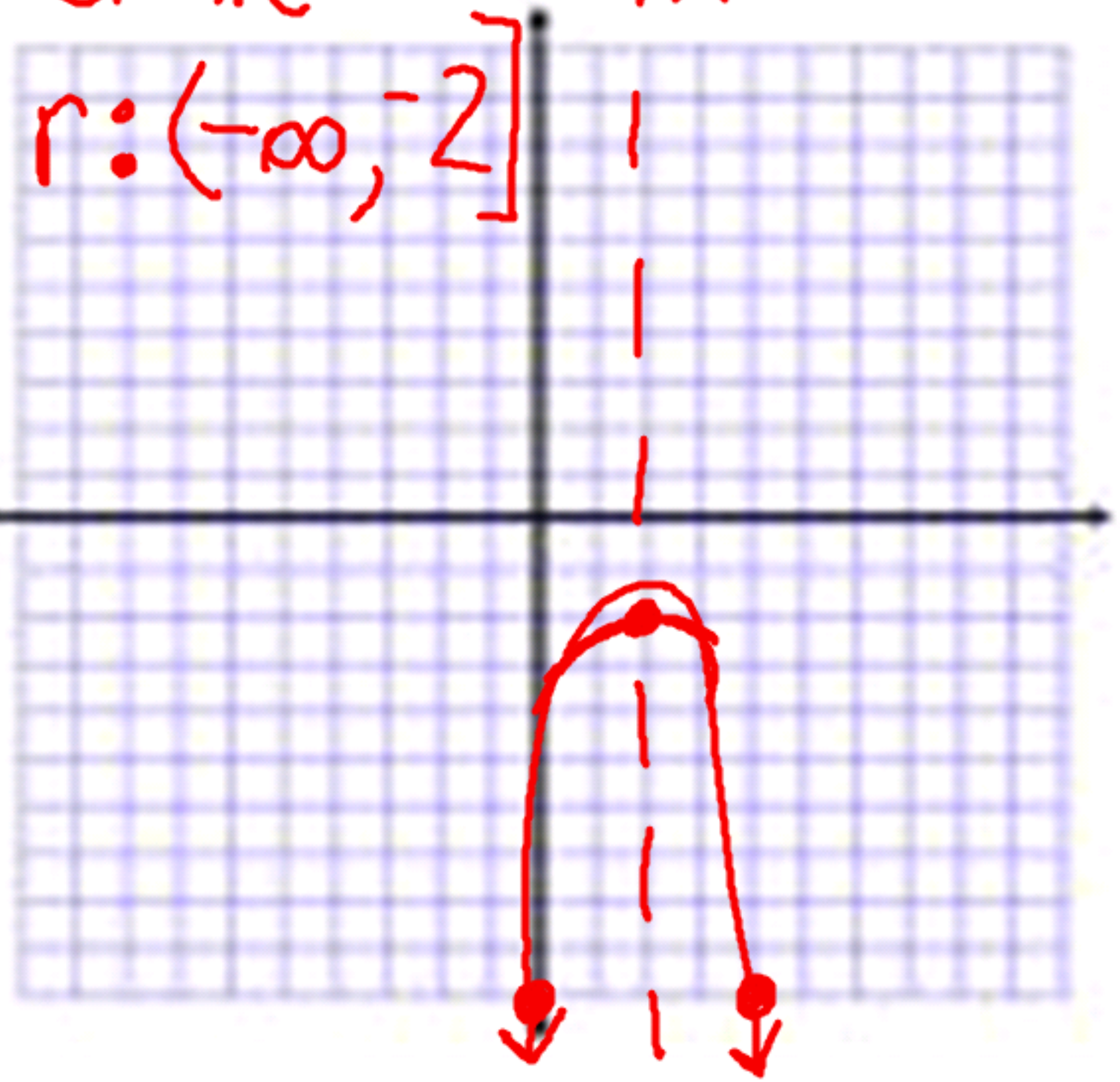
$-8-2$

-10

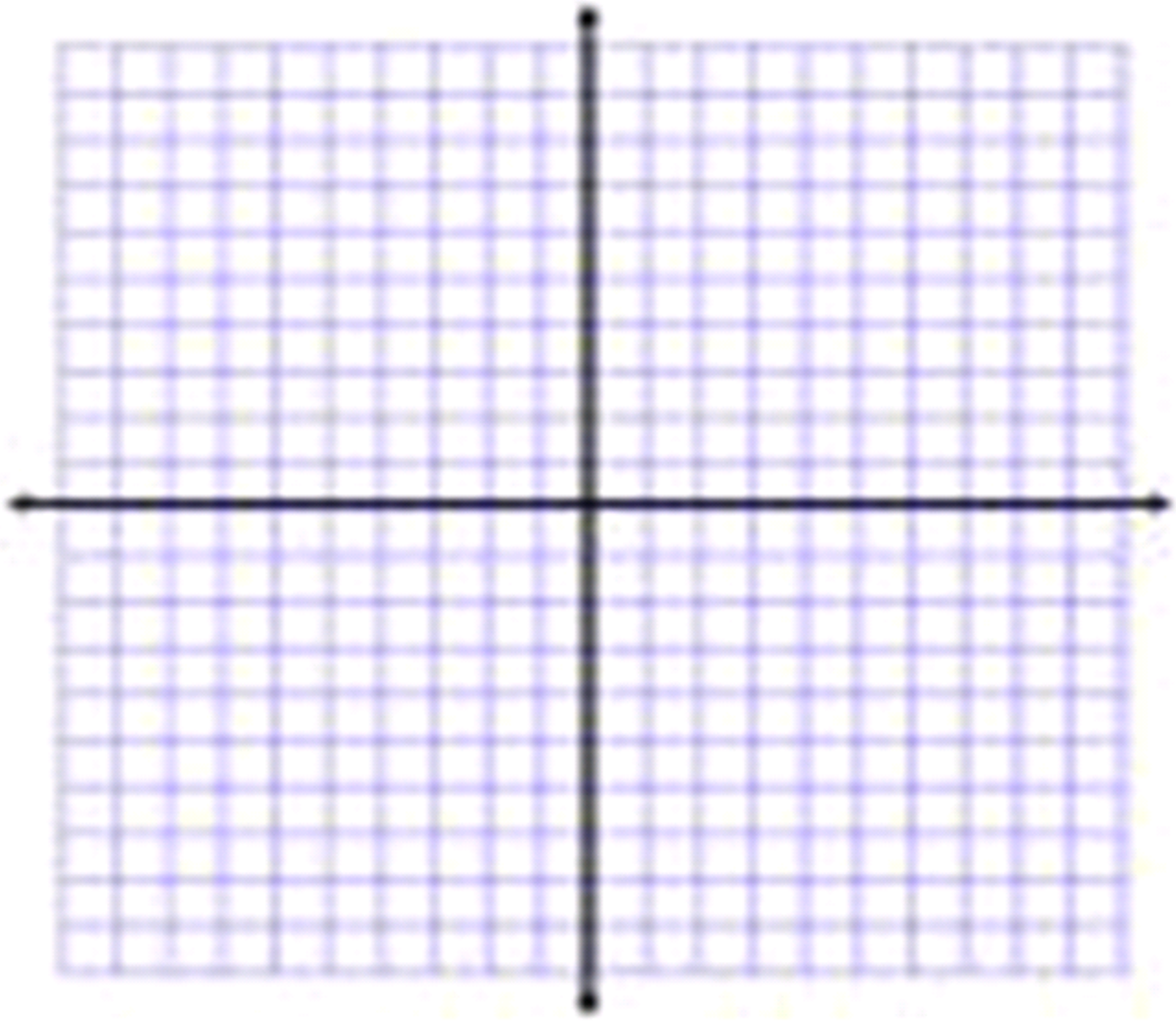
d: $\mathbb{R}$

r: $(-\infty,-2]$

$x=2$

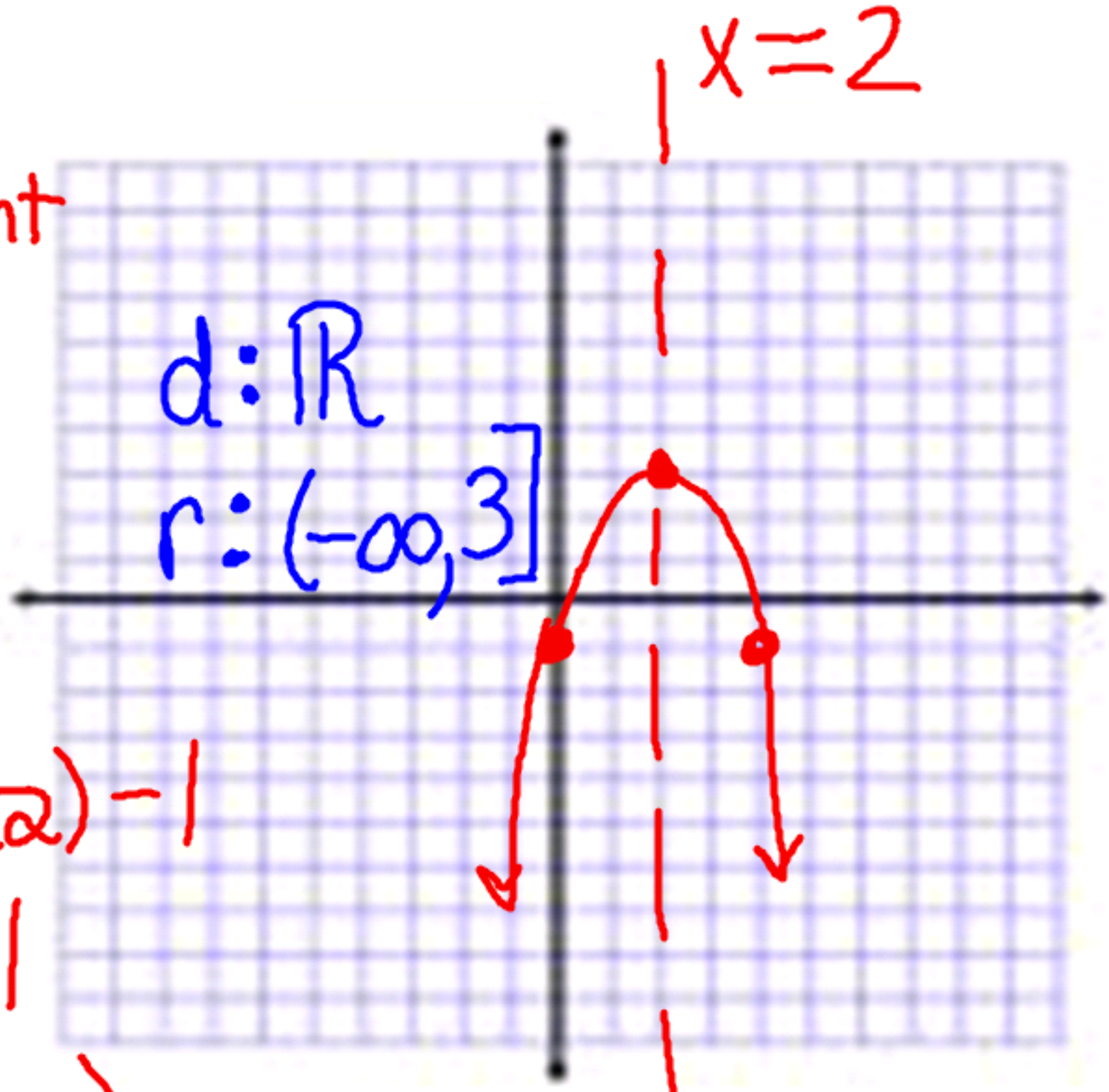


4. $y = -x^2 + 6x - 13$



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

y-int



vertex

$x_v = \frac{-4}{2(-1)}$

$= 2$

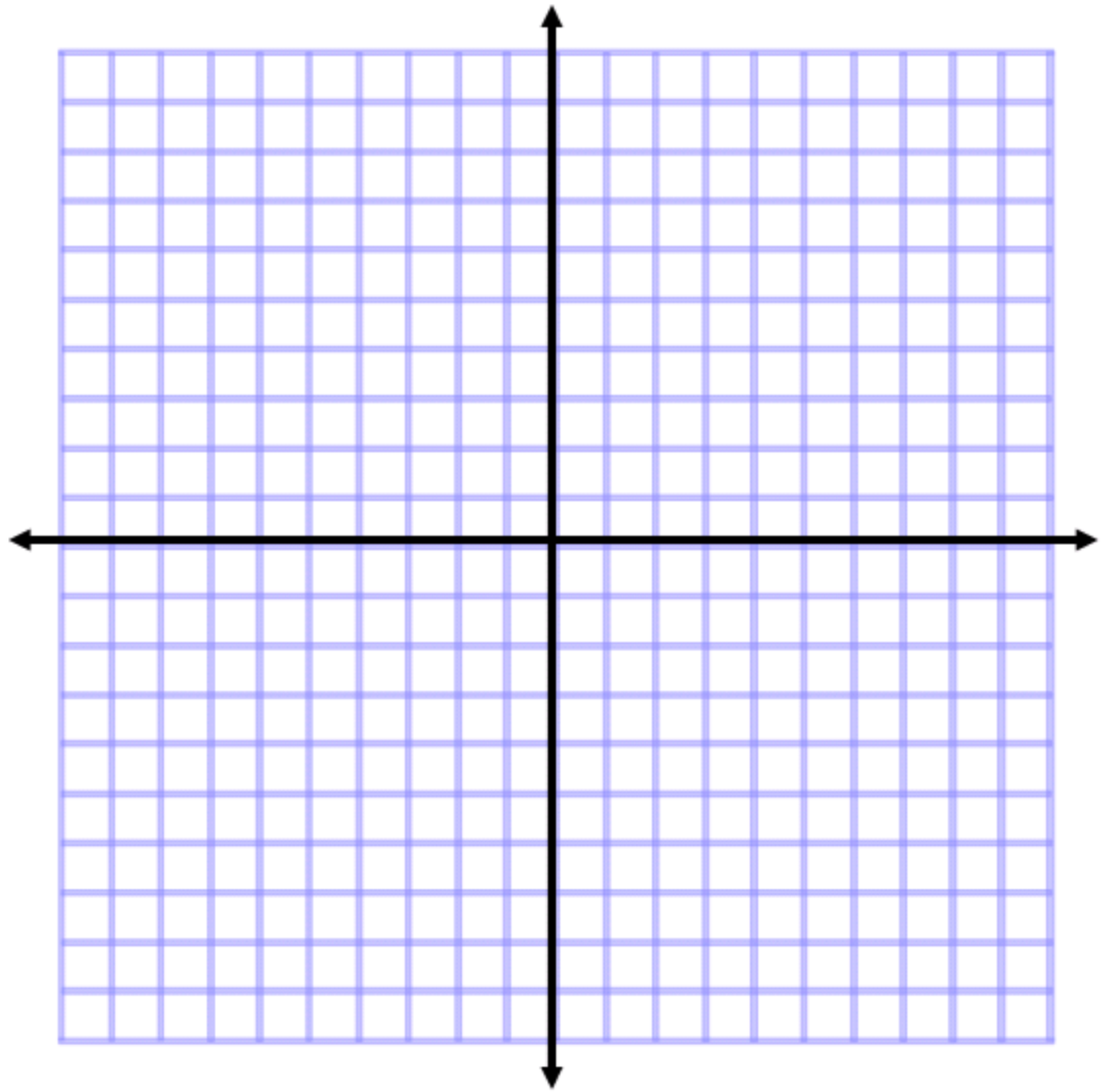
$y_v = -2^2 + 4(2) - 1$

$= -4 + 8 - 1$

$= 3$

$(2, 3)$

$$y = -.5x^2 - 4x - 4$$



pg343. #26

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

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

pg 343 #40

Given $f(x) = 2x^2-8x-3$

*Determine, without graphing whether the function has a max/min.

*Find the max/min (what, where)

*Identify domain & range

$x_v = \frac{8}{2(2)}$

$= 2$

$y_v = 8-16-3$

$= -11$

$(2, -11)$

minimum.

$r: [-11, \infty)$

Suggested Practice-

Sec 3.1

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17-38 odds

39,44

check answers in back of text, marked with purple post-it page marker and with purple marker and/or I will check individually