

1. Minimum Values

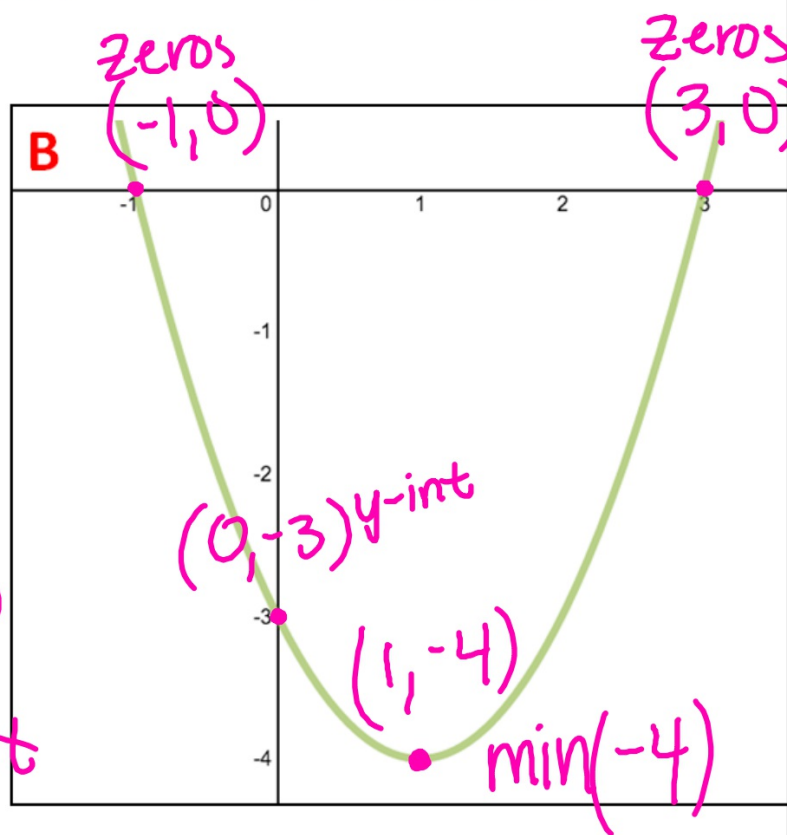
vertex
(0, -8)

A: $f(x) = x^2 - 2x - 8$

x	y
-5	8
-4	3
-3	0
-2	-1
-1	0
0	3
1	8

2. Zeros

3. Y-Intercepts



$$f(x) = x^2 - 2x - 8 \quad \text{Vertex}$$

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

$$x = \frac{-(-2)}{2(1)}$$

$$x = \frac{2}{2}$$

$$x = 1$$

$$f(1) = 1^2 - 2(1) - 8$$

$$f(1) = 1 - 2 - 8$$

$$f(1) = -9$$

$$\text{Vertex } (1, \textcircled{-9})_{\min}$$

$$0 = x^2 - 2x - 8$$

$$\begin{array}{c} \begin{array}{c} -8 \\ -4 \end{array} \begin{array}{c} \diagup \\ \diagdown \end{array} \begin{array}{c} 2 \\ -2 \end{array} \end{array} \quad x \begin{array}{|c|c|} \hline x^2 & -4x \\ \hline 2x & -8 \\ \hline \end{array}$$

$$0 = (x-4)(x+2)$$

$$x = 4 \quad x = -2$$

$$(4, 0) (-2, 0)$$