

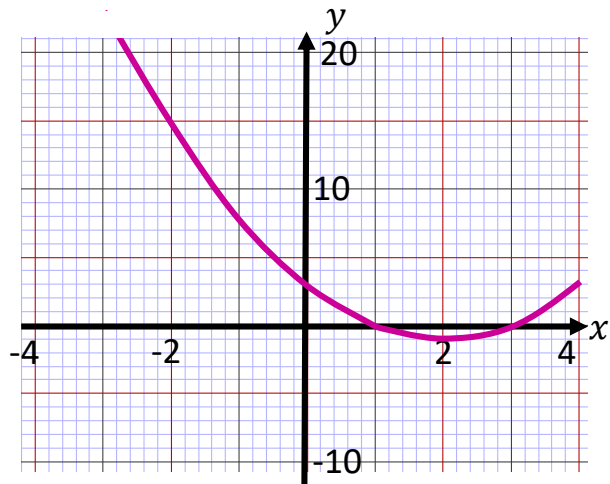


Timester Challenge

Interpreting Quadratic Graphs



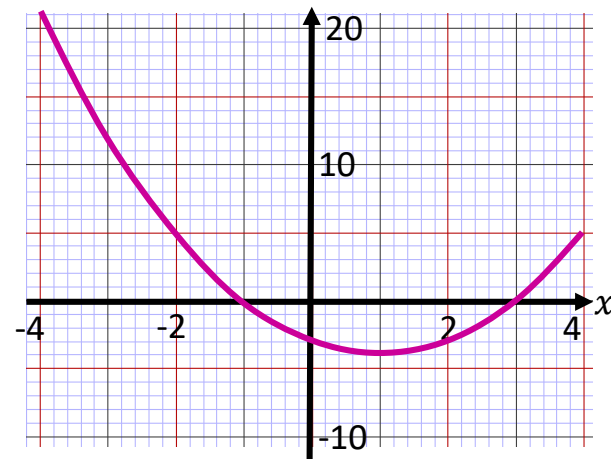
Here is the graph of $y = x^2 - 4x + 3$



- Use your graph to find an estimate for the minimum value of y ?
- Use your graph to find the two roots of $x^2 - 4x + 3 = 0$

Bronze ★

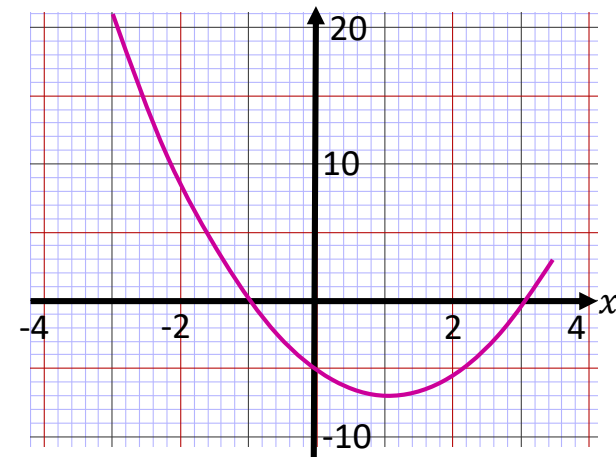
Here is the graph of $y = x^2 - 2x - 3$



- Use your graph to find the two roots of $x^2 - 2x - 3 = 0$
- Use your graph to estimate the values of x when $y = 4$.

Silver ★

The graph $y = x^2 - bx + a$ is shown below.



- Circle the coordinates of the turning point of the curve.
 $(-1, 0)$ $(0, -5)$ $(1, -7)$ $(3, 0)$
- Circle the two roots of $a + bx - x^2 = 0$
 -1 and 3 1 and -3 -1 and -3 1 and 3

Gold ★



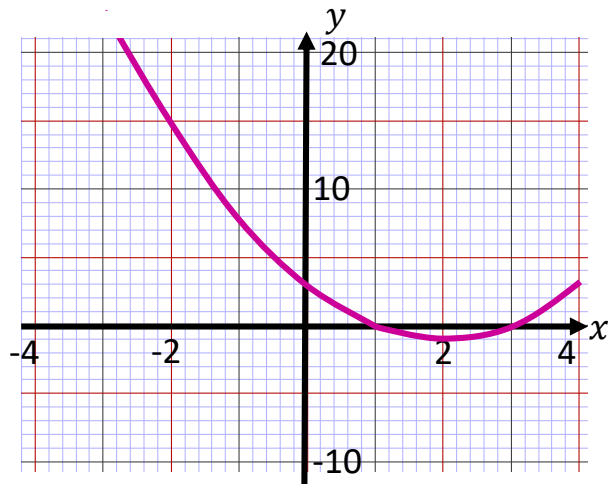
Timester Challenge

Interpreting Quadratic Graphs



Answers

Here is the graph of $y = x^2 - 4x + 3$



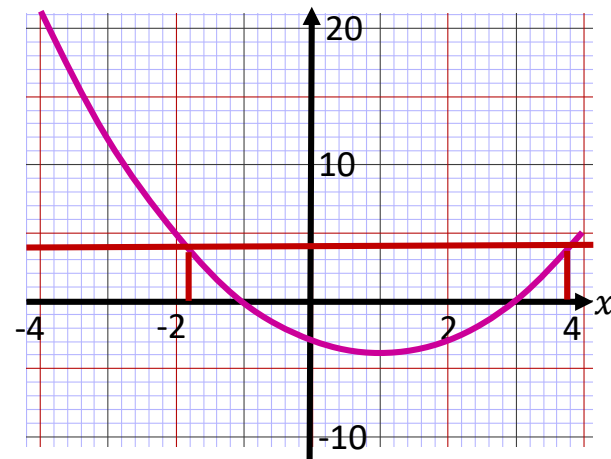
- a) Use your graph to find an estimate for the minimum value of y .

(2, -1)

- b) Use your graph to find the two roots of $x^2 - 4x + 3 = 0$

(1, 0) and (3, 0) **Bronze** ★

Here is the graph of $y = x^2 - 2x - 3$



- a) Use your graph to find the two roots of $x^2 - 2x - 3 = 0$

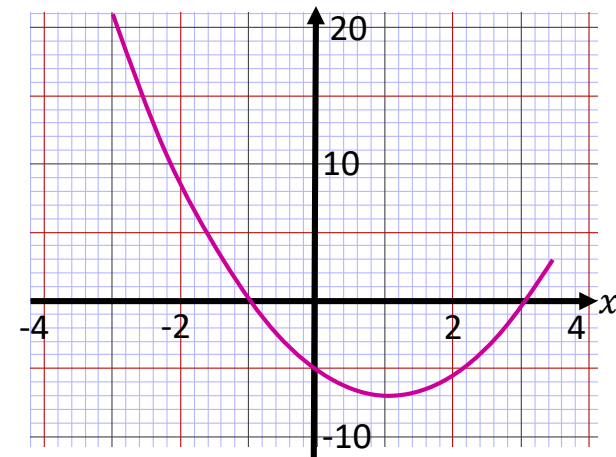
(-1, 0) and (3, 0)

- b) Use your graph to estimate the values of x when $y = 4$.

-1.8 and 3.8

Silver ★

The graph $y = x^2 - bx + a$ is shown below.



- a) Circle the coordinates of the turning point of the curve.

(-1, 0) (0, -5) **(1, -7)** (3, 0)

- b) Circle the two roots of $a + bx - x^2 = 0$

-1 and 3 1 and -3 -1 and -3 1 and 3

Gold ★