

QUIZ Chapter 3 Part I

1. Consider the quadratic function $y = x^2 - 2x - 3$ and fill in the blanks:

Coefficients: $a = 1$ $b = -2$ $c = -3$

direction of opening: \curvearrowright y -intercept: -3

coordinates of the vertex (show your work): $-\frac{b}{2a} = \frac{2}{2} = 1$ $(1, -4)$

when $x = 1, y = -4$

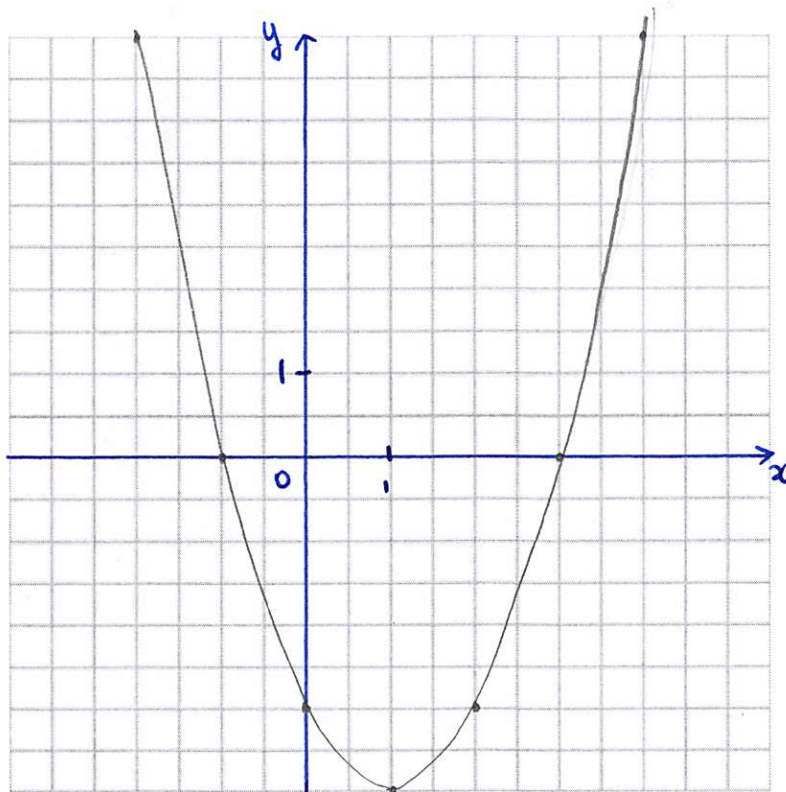
Table of values (with distinct values for both x and y):

x	2	3	4
y	-3	0	5

Domain: \mathbb{R}

Range: $[-4, +\infty)$

Graph:



Name: _____

2. Consider the quadratic function $y = -2x^2 - 8x - 3$ and fill in the blanks:

Coefficients: $a = -2$ $b = -8$ $c = -3$

direction of opening: \curvearrowright y -intercept: -3

coordinates of the vertex (show your work):

$$\frac{-b}{2a} = \frac{8}{-4} = -2$$

when $x = -2$, $y = -2(-2)^2 - 8(-2) - 3$
 $= -8 + 16 - 3 = 5$

$(-2, 5)$

Domain: \mathbb{R}

Range: $(-\infty, 5]$

Graph $y = -2x^2 - 8x - 3$ using your knowledge of $y = x^2$.

