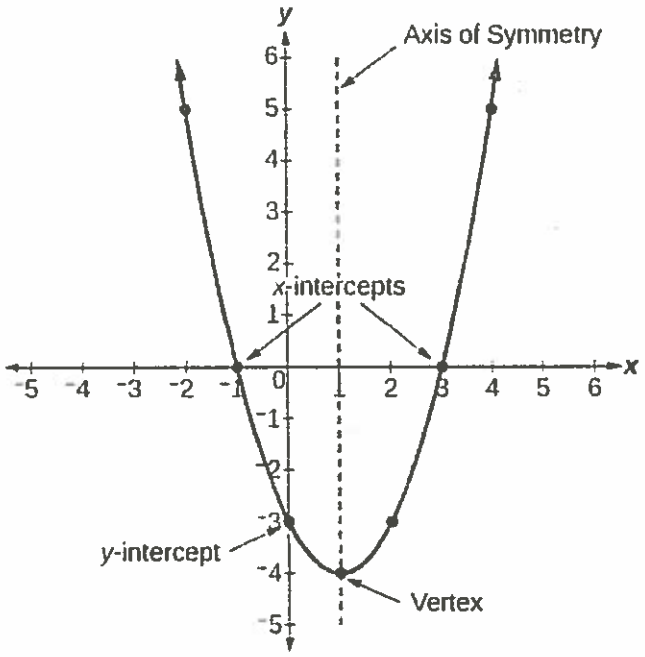
"Teacher"

2Q4

Notes (20 points) /20

Identify All Features of the Graph of a Quadratic Function



Vertex: (1, -4)

Equation of AOS: $x = 1$

Y-Intercept: (0, -3)

X-Intercept(s): (-1, 0) (3, 0)

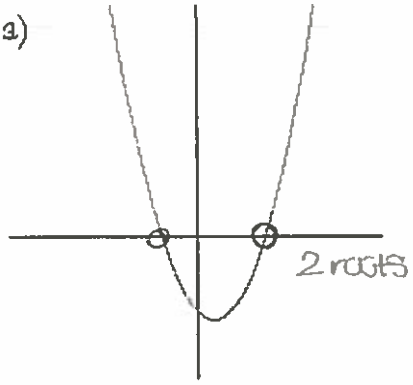
Key Vocabulary

X-Intercepts are also called:

- Roots
- Solutions
- zero's

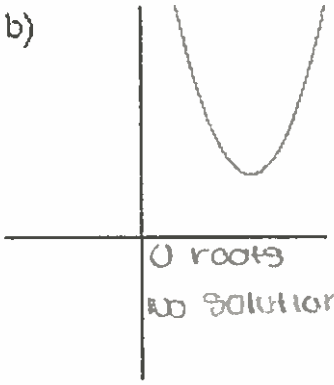
How many roots does each function have?

a)



2 roots

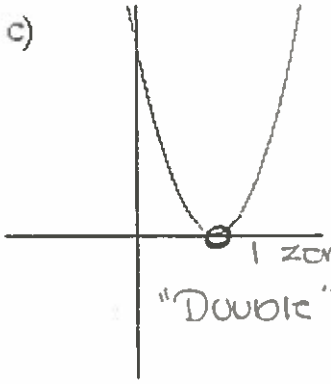
b)



0 roots

no solution

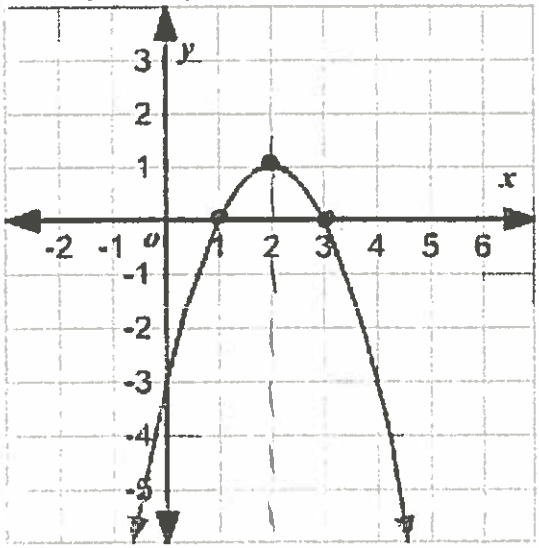
c)



1 zero

"Double" Root

Identify the key features of the graph. Describe any transformations you see. Write the vertex form equation.



Vertex: (2, 1) max

AOS: $x = 2$

y-int: (0, -3)

x-int: (1, 0) (3, 0)

$a = -1$

$h = 2$ units right

$k = 1$ unit up

$y = a(x-h)^2 + k$

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