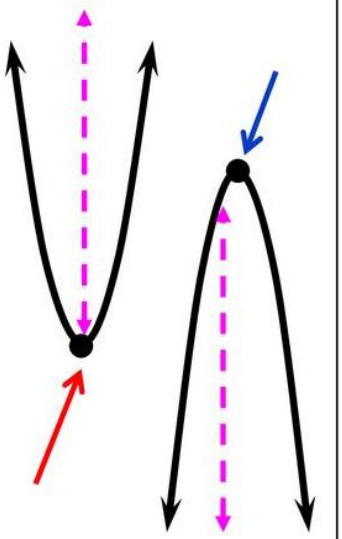
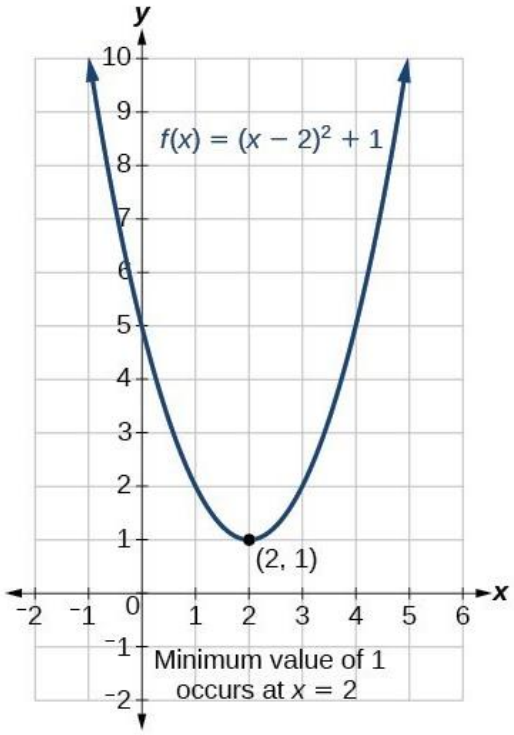
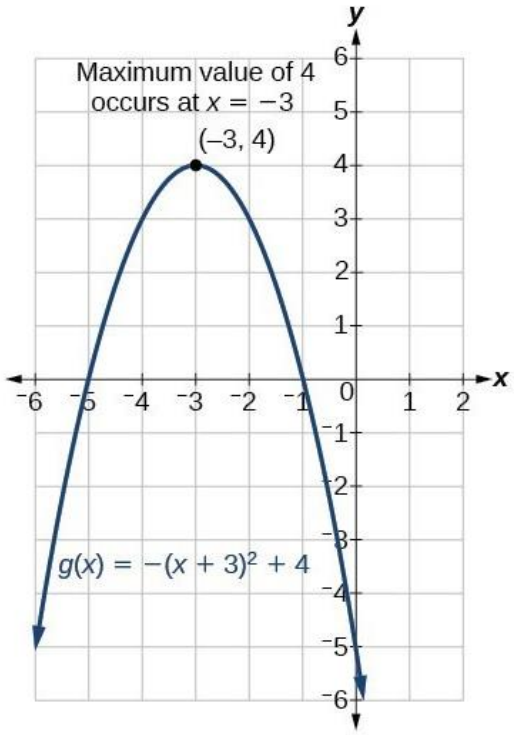
OBERLIN HIGH SCHOOL
MATHEMATICS DEPARTMENT
GRADE 10
IDENTIFYING PARTS OF QUADRATIC GRAPHS

VOCABULARY

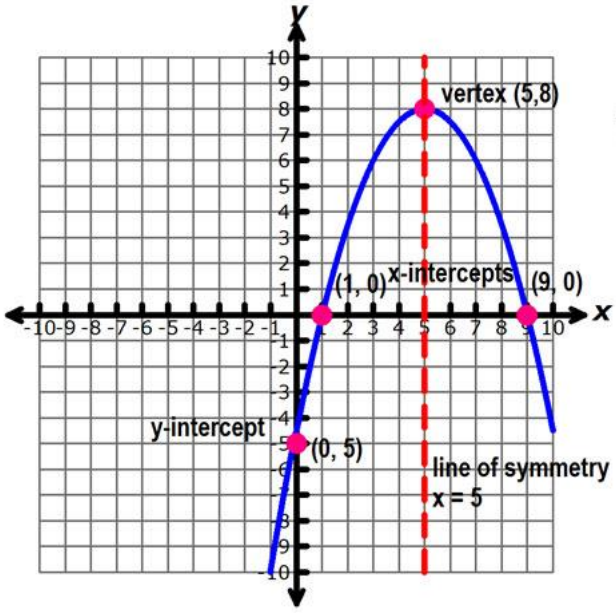
Word	Definition	Picture
Parabola	Shape of quadratic equation	
Vertex	Point where direction of graph changes (curve)	
Axis of Symmetry	Imaginary line where parabola can be folded in half	
Maximum	Highest point on graph	
Minimum	Lowest point on graph	



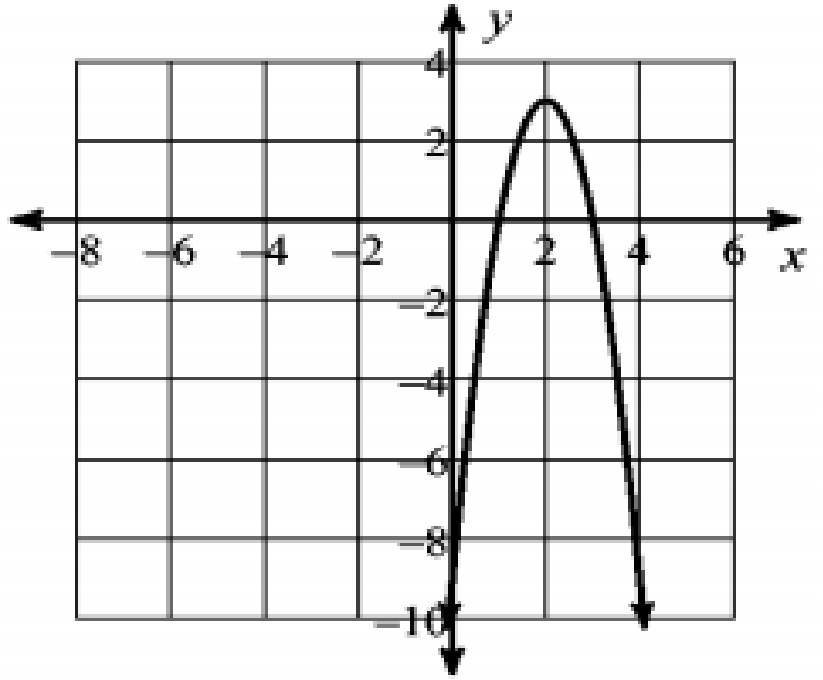
(a)



(b)



EXAMPLE 1:



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

Y-Intercept: (0, -9)

Vertex: (2, 3)

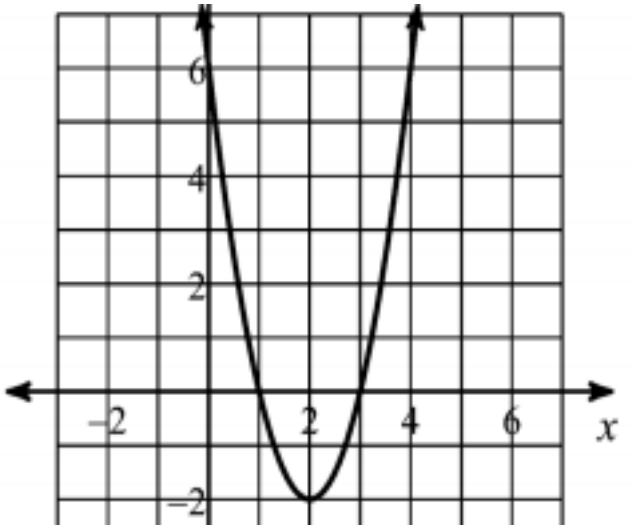
Point of Extremum (circle one): Maximum or Minimum: y= 3

Axis of Symmetry: x = 2

Root(s): x = 1, x = 3

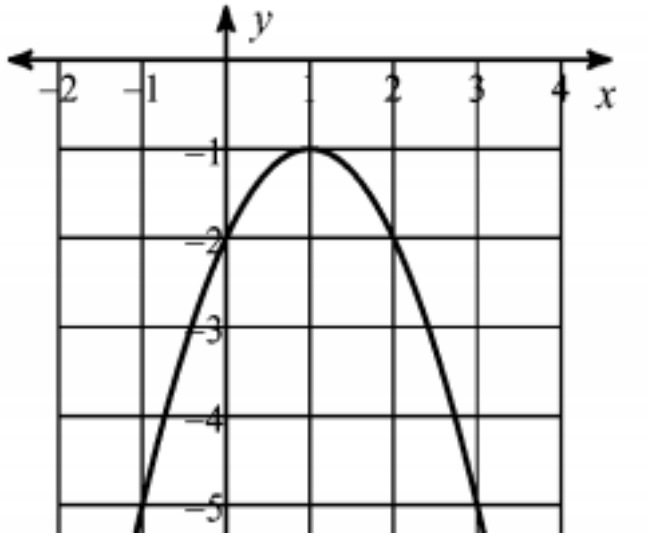
Solution(s): x = 1, x = 3

EXAMPLE 2:



X-Intercept(s): (1, 0) and (3, 0)
Y-Intercept: (0, 6)
Vertex: (2, -2)
Point of Extremum (circle one): Maximum or Minimum; y= -2
Axis of Symmetry: x = 2
Root(s): x = 1, x = 3
Solution(s): x = 1, x = 3

EXAMPLE 3:



X-Intercept(s): None (doesn't touch x-axis)
Y-Intercept: (0, -2)
Vertex: (1, -1)
Point of Extremum (circle one): Maximum or Minimum: y= -1
Axis of Symmetry: x = 1
Root(s): None (doesn't touch x-axis)
Solution(s): None (doesn't touch x-axis)

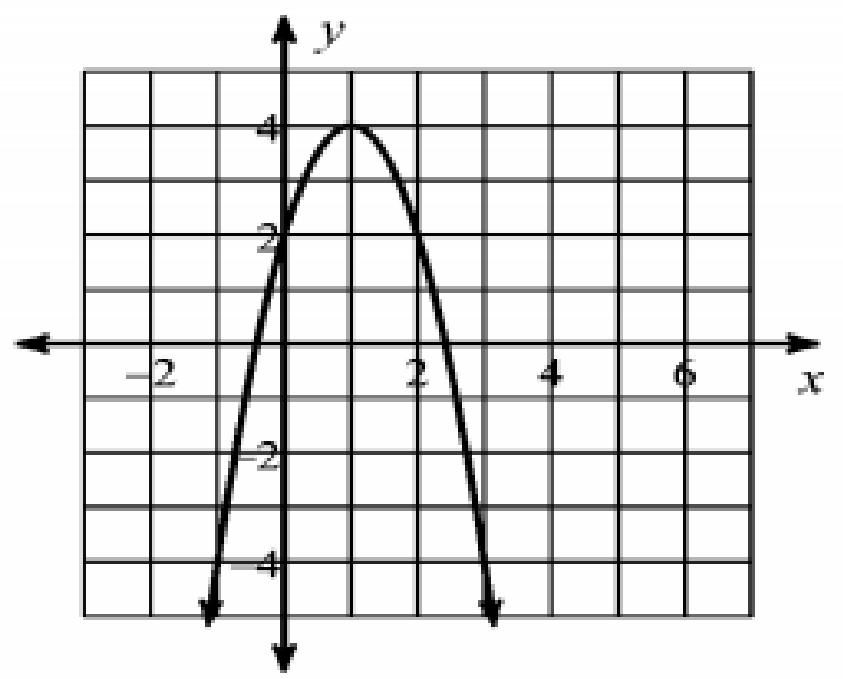
ACTIVITY

Name_____

Date _____ **Class** _____

Identify the key features of quadratic functions

QUESTION 1



X-Intercept(s) _____

Y-Intercept _____

Vertex _____

Point of Extremum (circle one):

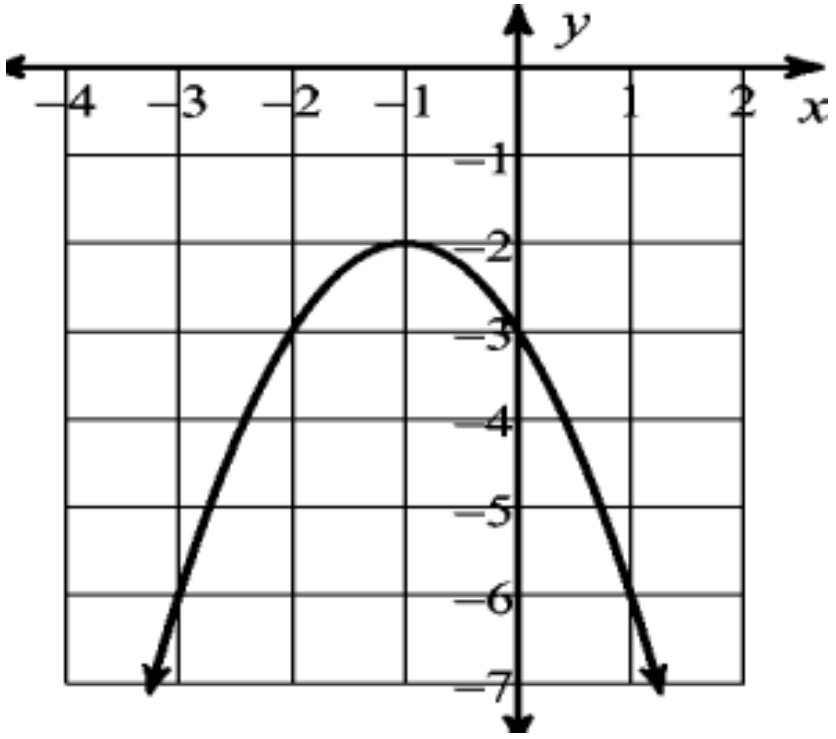
Maximum or Minimum, y = _____

Axis of Symmetry x = _____

Root(s) _____

Solution(s) _____

QUESTION 2



X-Intercept(s) _____

Y-Intercept _____

Vertex _____

Point of Extremum (circle one):

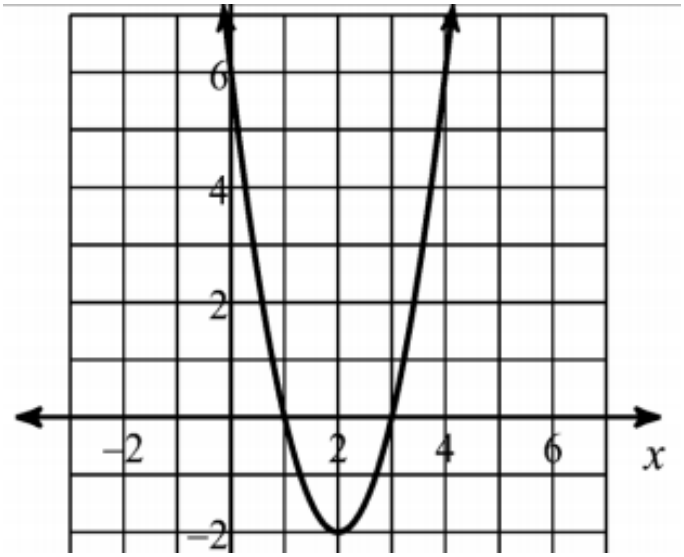
Maximum or Minimum, y = _____

Axis of Symmetry x = _____

Root(s) _____

Solution(s) _____

QUESTION 3



X-Intercept(s) _____

Y-Intercept _____

Vertex _____

Point of Extremum (circle one):

Maximum or Minimum, y = _____

Axis of Symmetry x = _____

Root(s) _____

Solution(s) _____