ATHS FC – Math Department Al Ain
Homework Assignment 2

Section		**Date**	
Name		**Lesson**	**10.2 (Parabola)**
ID		**Marks**	

Question 1:

$y = -x^2 - 2x + 3$

1) Identify the direction of opening of the parabola

2) Identify the vertex

3) Find the axis of symmetry

4) Find the focus

5) Find the directrix

6) Write the equation in standard form

Question 2:

$$y = 2x^2 + 4x + 5$$

1) Identify the direction of opening of the parabola

2) Identify the vertex

3) Find the axis of symmetry

4) Find the focus

5) Find the directrix

6) Write the equation in standard form

Question 3:

$$x + y^2 = 4y - 1$$

1) Identify the direction of opening of the parabola

2) Identify the vertex

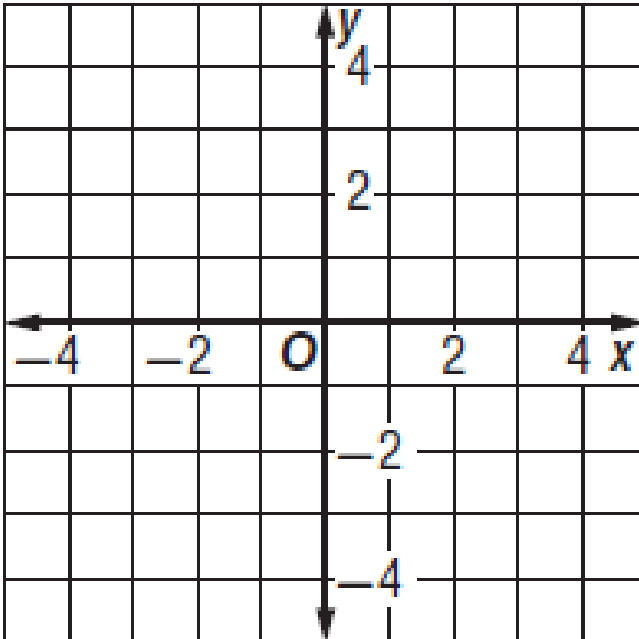3) Find the axis of symmetry

4) Find the focus

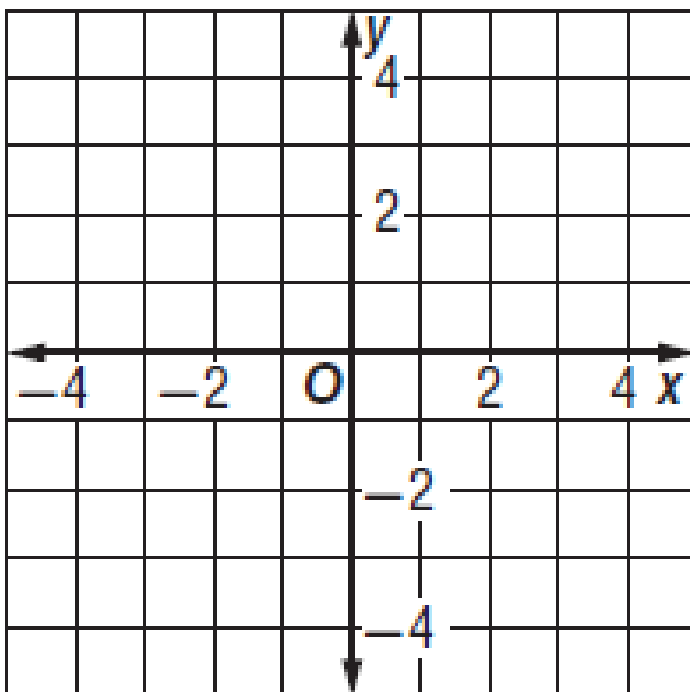5) Find the directrix

6) Write the equation in standard form

Question 4:

Write an equation for each parabola described below then graph

  a) Vertex (3 , 3) ; Focus (3 , 5)

  b) Vertex (4 , - 5) ; directrix : x= 3

Question 5:

Word Problem

Bridges :   The 52 meter-long Hulme Arch Bridge in Manchester, England, is supported by cables suspended from a parabolic steel arch. The highest point of the arch is 25 meters above the bridge, and the focus of the arch is about 18 meters above the bridge.
NOTE: (Search for the picture).