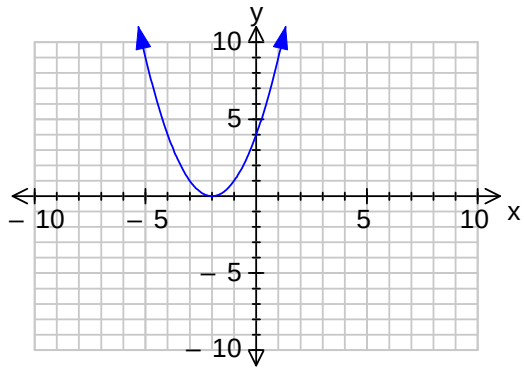
(C1-2.1a) Name:

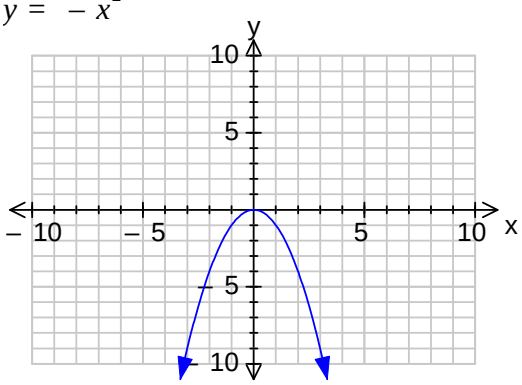
Homework Questions 1 – Plotting Quadratic Equations

1. Plot the following quadratic equations on graph paper (take the values of x from 4 to -4)

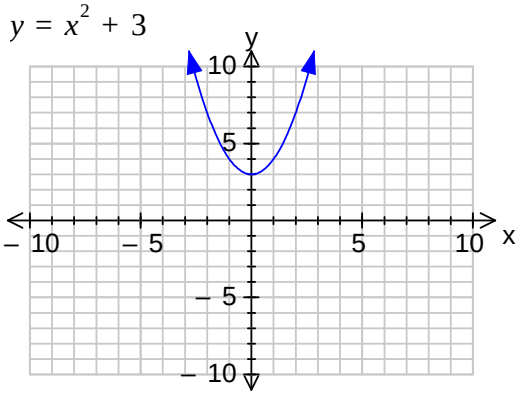
a) $y = (x + 2)^2$



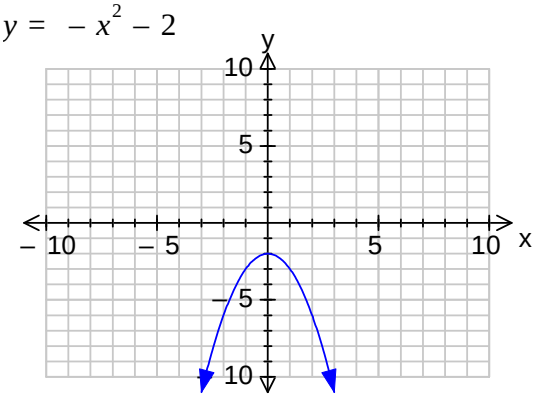
b) $y = -x^2$



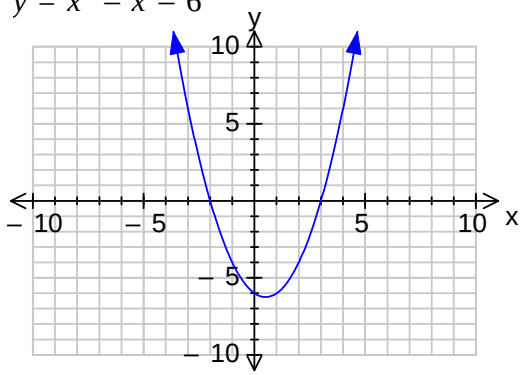
c) $y = x^2 + 3$



d) $y = -x^2 - 2$



e) $y = x^2 - x - 6$



2. State the minimum value of y for each of the graphs drawn above and the value of x at this point.

a) $y = (x + 2)^2$ — Min y = 0 x = -2

b) $y = -x^2$ — Min y = infinite x = 0

c) $y = x^2 + 3$ — Min y=3 x = 0

d) $y = -x^2 - 2$ — Min y = infinite x = 0

e) $y = x^2 - x - 6$ — Min y = -6.25 x = 0.5

3. State the line of symmetry for each of the graphs drawn above

a) $y = (x + 2)^2$ — X = -2

b) $y = -x^2$ — X = 0

c) $y = x^2 + 3$ — X = 0

d) $y = -x^2 - 2$ — X = 0

e) $y = x^2 - x - 6$ — X = 0.5