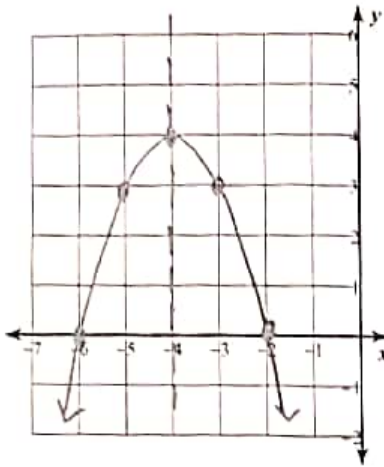


4.1 Homework

Sketch the graph of each function.

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

Vertex:  $(-4, 4)$

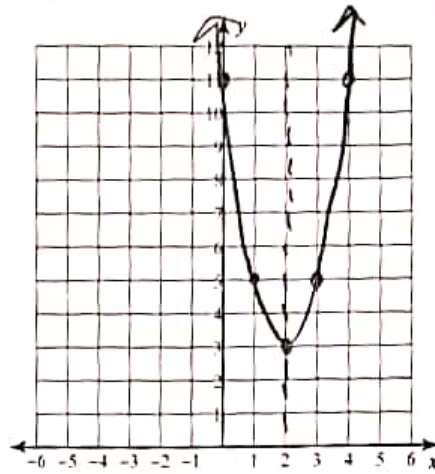


x	y
-5	3
-6	0

$-(-5+4)^2 + 4$   
 $-(-1)^2 + 4$   
 $-1 + 4 = 3$   
 $-(-6+4)^2 + 4$   
 $-(2)^2 + 4$   
 $-4 + 4 = 0$

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

Vertex:  $(2, 3)$

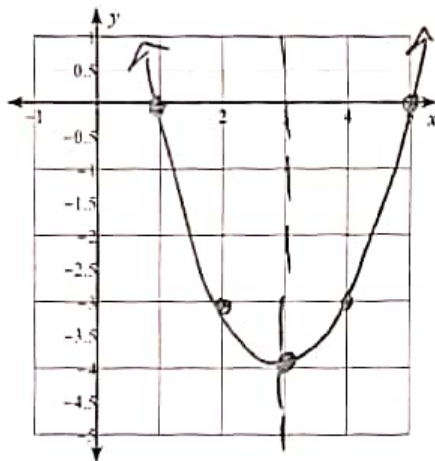


x	y
1	5
0	11

$2(1-2)^2 + 3$   
 $2(1)^2 + 3$   
 $2 + 3 = 5$   
 $2(0-2)^2 + 3$   
 $2(2)^2 + 3$   
 $8 + 3 = 11$

3)  $y = (x-3)^2 - 4$

Vertex:  $(3, -4)$

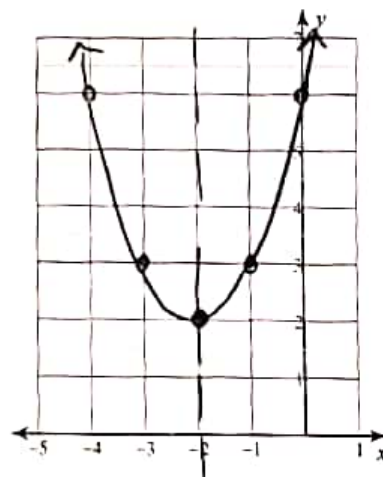


x	y
2	-3
1	0

$(2-3)^2 - 4$   
 $-1^2 - 4$   
 $1 - 4$

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

Vertex:  $(-2, 2)$

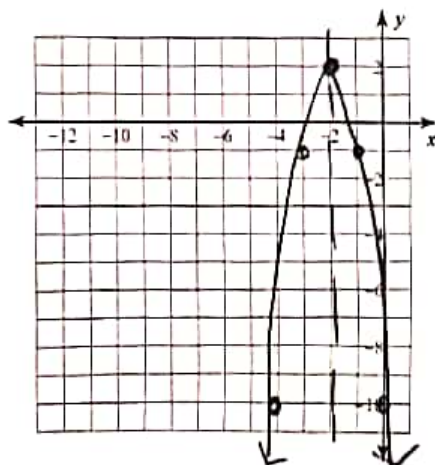


x	y
-1	3
0	6

$(-1+2)^2 + 2$   
 $1^2 + 2$

5)  $y = -3(x+2)^2 + 2$

Vertex:  $(-2, 2)$

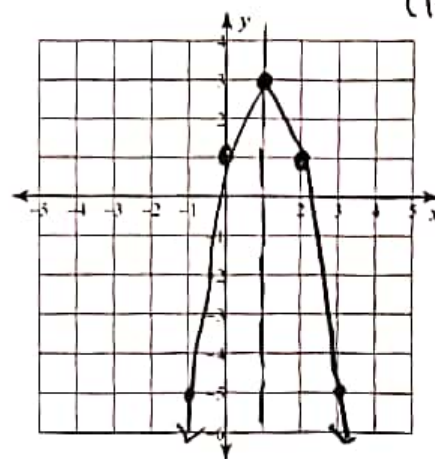


x	y
-1	-1
0	-10

$-3(-1+2)^2 + 2$   
 $-3(1)^2 + 2$   
 $-3 + 2 = -1$

6)  $y = -2(x-1)^2 + 3$

Vertex:  $(1, 3)$

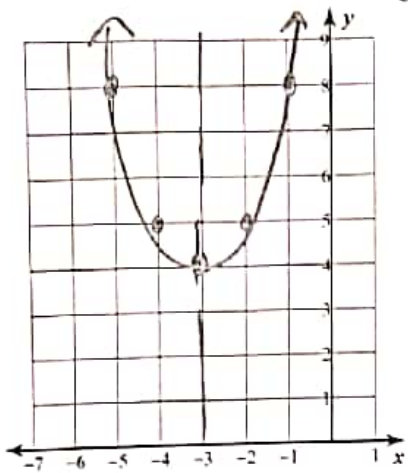


x	y
0	1
-1	-5

$-2(0-1)^2 + 3$   
 $-2 + 3 = 1$

7)  $y = (x+3)^2 + 4$

$(-3, 4)$



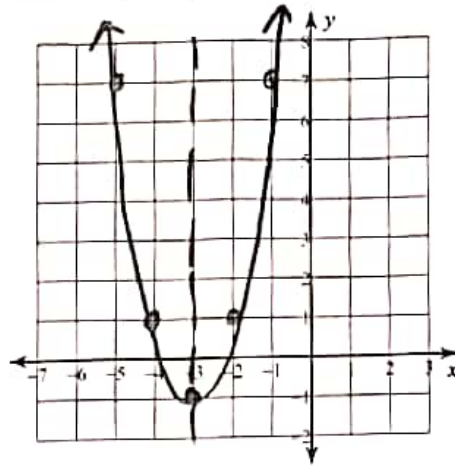
x	y
-2	5
-1	8

$(-2+3)^2 + 4$

$(-1+3)^2 + 4$

8)  $y = 2(x+3)^2 - 1$

$(-3, -1)$



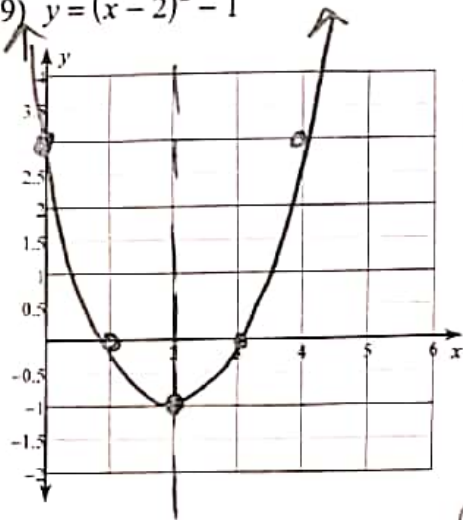
x	y
-2	1
-1	7

$2(-2+3)^2 - 1$

$2(-1+3)^2 - 1$

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

$(2, -1)$

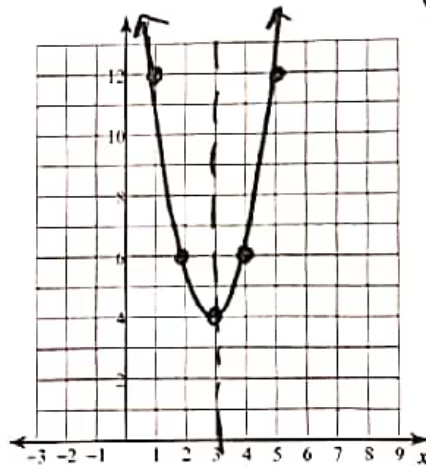


x	y
1	0
0	3

$(1-2)^2 - 1$

10)  $y = 2(x-3)^2 + 4$

$(3, 4)$



x	y
2	6
1	12

$2(2-3)^2 + 4$

$2(1-3)^2 + 4$

6

$2(1-3)^2 + 4$

$2(4) + 4$