

Practice Graphing

Rewrite the following functions in standard form.

1. $f(x) = (x - 3)(x + 4)$

$f(x) = x^2 + x - 12$

2. $f(x) = (x + 2)^2 - 3$

$f(x) = x^2 + 4x + 1$

3. $f(x) = 2x(x - 1)$

$f(x) = 2x^2 - 2x$

Rewrite the following functions in vertex form.

4. $f(x) = x^2 - 2x - 8$

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

5. $f(x) = (x + 3)(x - 1)$

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

6. $f(x) = x^2 + 4x - 1$

$f(x) = (x + 2)^2 - 5$

Rewrite the following functions in intercept form.

7. $f(x) = (x + 2)^2 - 9$

$f(x) = (x + 5)(x - 1)$

8. $f(x) = x^2 - 3x - 18$

$f(x) = (x - 6)(x + 3)$

9. $f(x) = x^2 + 6x + 8$

$f(x) = (x + 4)(x + 2)$

Graph and determine the characteristics of the following quadratics.

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

AOS: $x = 2$

Vertex: $(2, -1)$

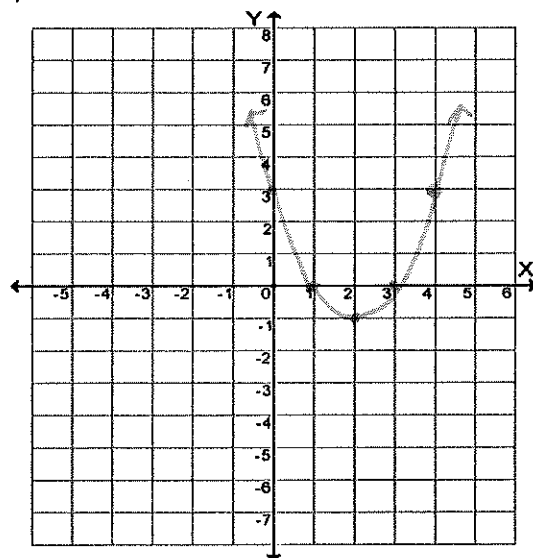
Y-Intercept: $(0, 3)$

Max/Min: -1

Domain: $(-\infty, \infty)$

Range: $[-1, \infty)$

x	y
0	3
1	0
2	-1
3	0
4	3



11.) $f(x) = -x^2 + 2x + 1$

AOS: $x = 1$

Vertex: $(1, 2)$

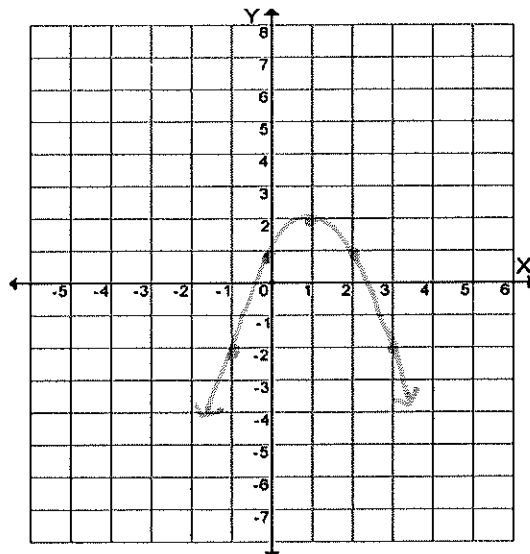
Y-Intercept: $(0, 1)$

Max/Min: 2

Domain: $(-\infty, \infty)$

Range: $(-\infty, 2]$

X	Y
-1	-2
0	1
1	2
2	1
3	-2



12.) $f(x) = (x + 2)^2 - 3$

AOS: $x = -2$

Vertex: $(-2, -3)$

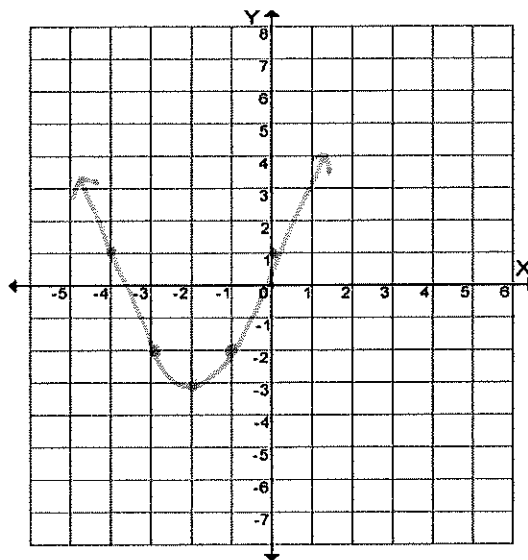
Y-Intercept: $(0, 1)$

Max/Min: -3

Domain: $(-\infty, \infty)$

Range: $[-3, \infty)$

X	Y
-4	1
-3	-2
-2	-3
-1	-2
0	1



13.) $f(x) = -2(x - 1)^2 + 4$

AOS: $x = 1$

Vertex: $(1, 4)$

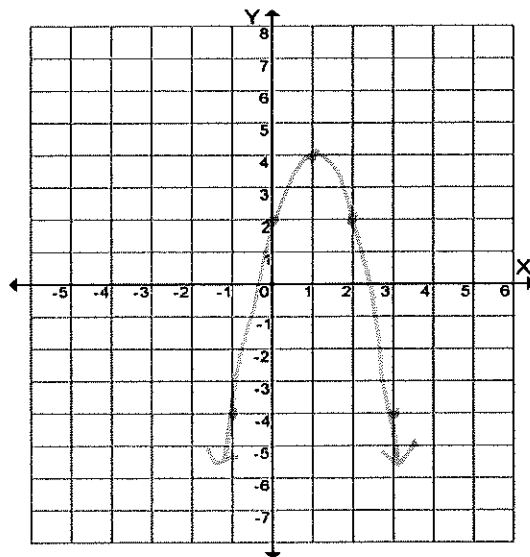
Y-Intercept: $(0, 2)$

Max/Min: 4

Domain: $(-\infty, \infty)$

Range: $(-\infty, 4]$

X	Y
-1	-4
0	2
1	4
2	2
3	-4



14.) $f(x) = (x - 1)(x + 3)$

AOS: $x = -1$

Vertex: $(-1, -4)$

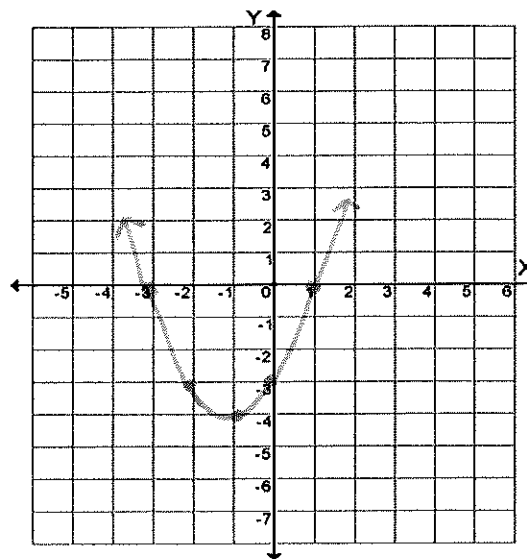
Y-Intercept: $(0, -3)$

Max/Min: -4

Domain: $(-\infty, \infty)$

Range: $[-4, \infty)$

x	y
-3	0
-2	-3
-1	-4
0	-3
1	0



15.) $f(x) = (x + 2)(x - 2)$

AOS: $x = 0$

Vertex: $(0, -4)$

Y-Intercept: $(0, -4)$

Max/Min: -4

Domain: $(-\infty, \infty)$

Range: $[-4, \infty)$

x	y
-2	0
-1	-3
0	-4
1	-3
2	0

