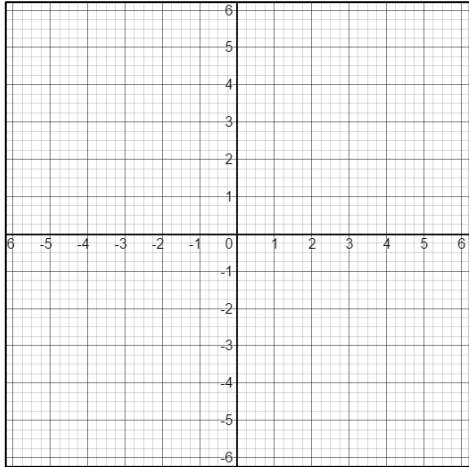


1. Graph $f(x) = (x + 3)^2 - 2$

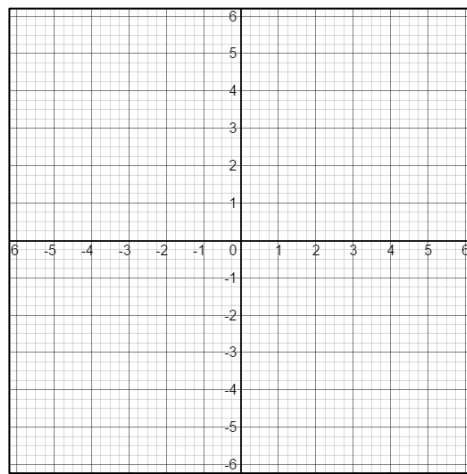
Vertex = _____



x	$f(x)$

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

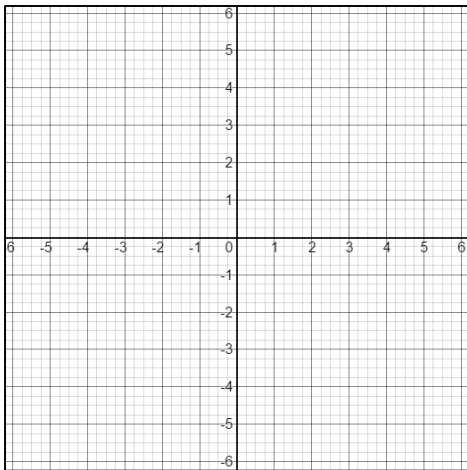
Vertex = _____



x	$f(x)$

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

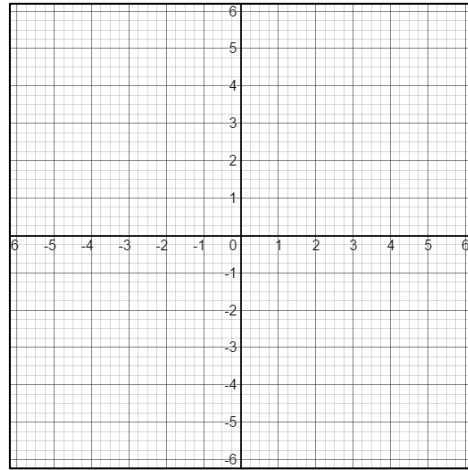
Vertex = _____



x	$f(x)$

4. Graph $f(x) = (x - 4)^2 - 5$

Vertex = _____



x	$f(x)$

Sketch the parabolas using the intercepts method.

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

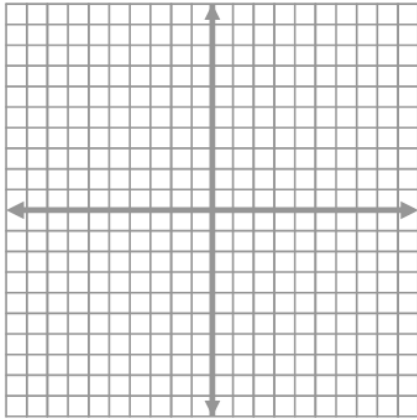
x-intercepts: _____

vertex: _____

axis of symmetry: _____

y-intercept: _____

other points: _____



b) $f(x) = 2(x + 3)(x - 1)$

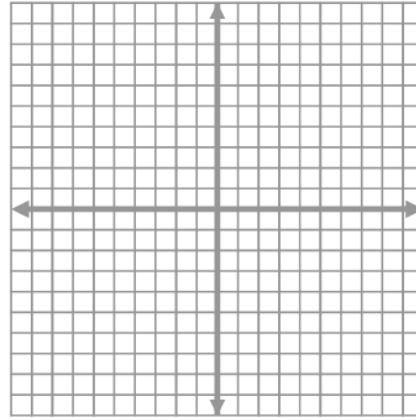
x-intercepts: _____

vertex: _____

axis of symmetry: _____

y-intercept: _____

other points: _____



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

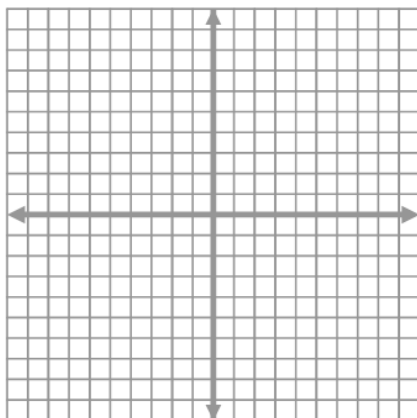
x-intercepts: _____

vertex: _____

axis of symmetry: _____

y-intercept: _____

other points: _____



d) $f(x) = -\frac{1}{2}(x + 2)(x - 4)$

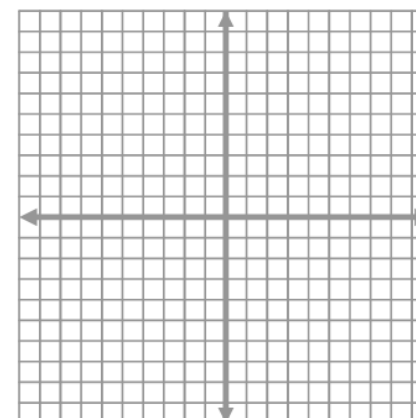
x-intercepts: _____

vertex: _____

axis of symmetry: _____

y-intercept: _____

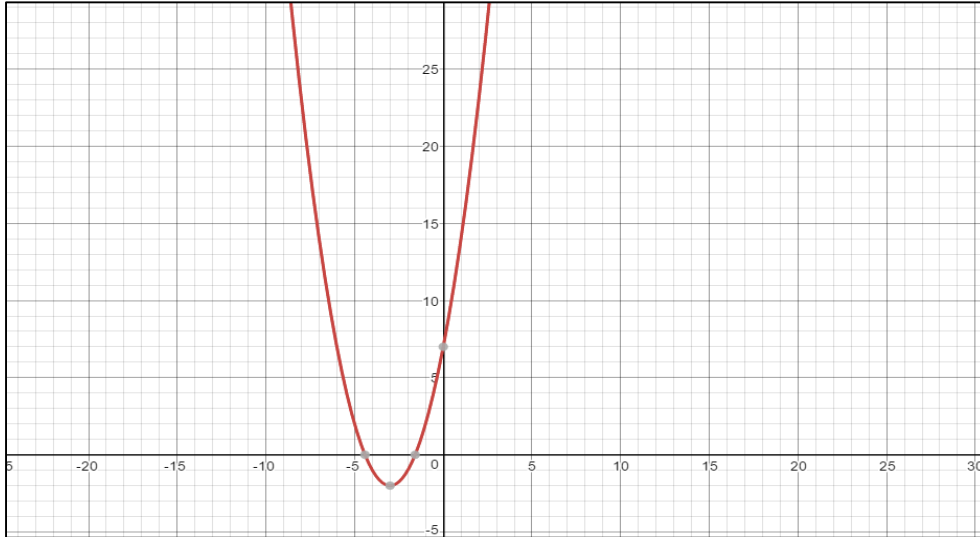
other points: _____



ANSWER KEY

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

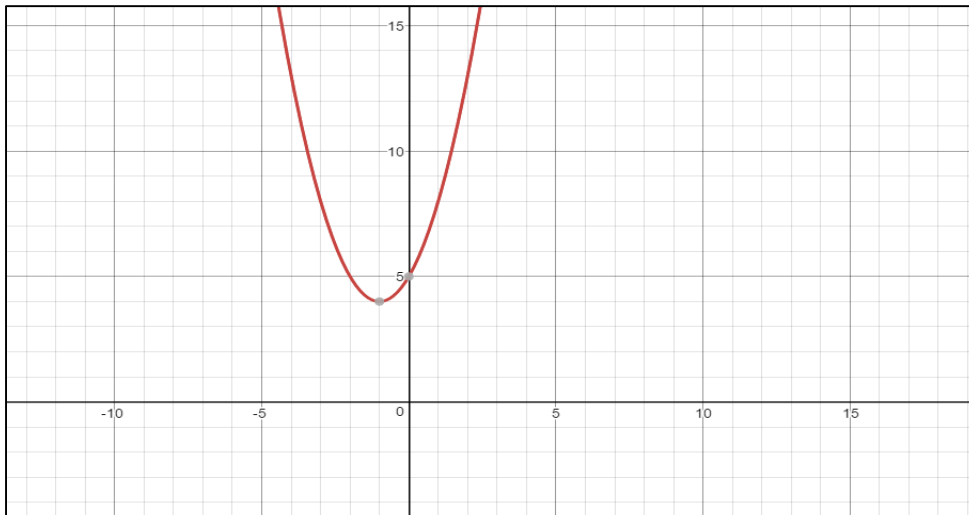
Vertex = $(-3, -2)$



x	f(x)
-2	-1
-1	2
0	7
1	14
2	23

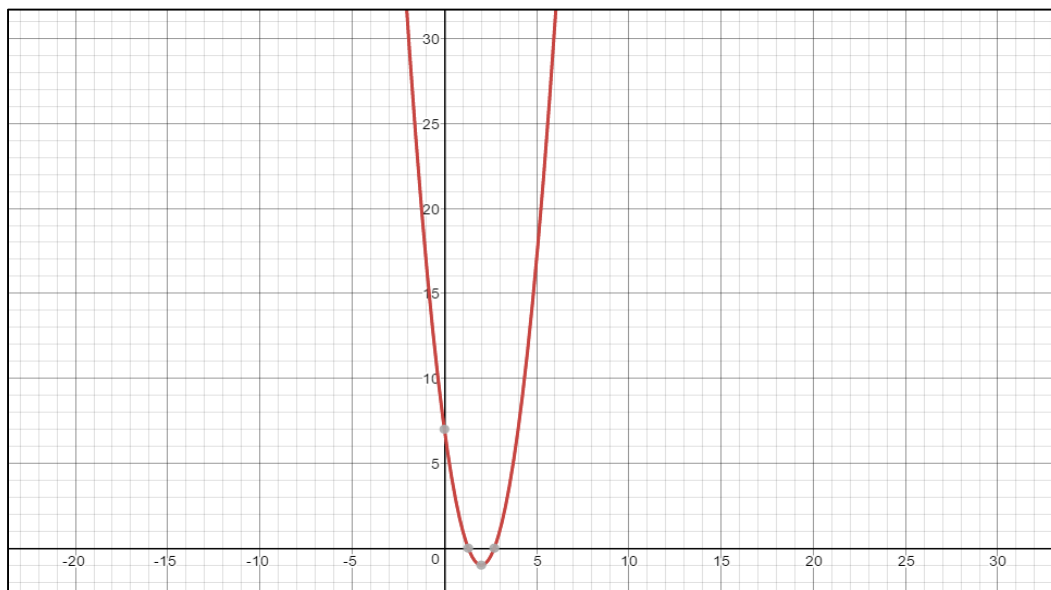
2. Graph $f(x) = (x + 1)^2 + 4$.

Vertex = $(-1, 4)$



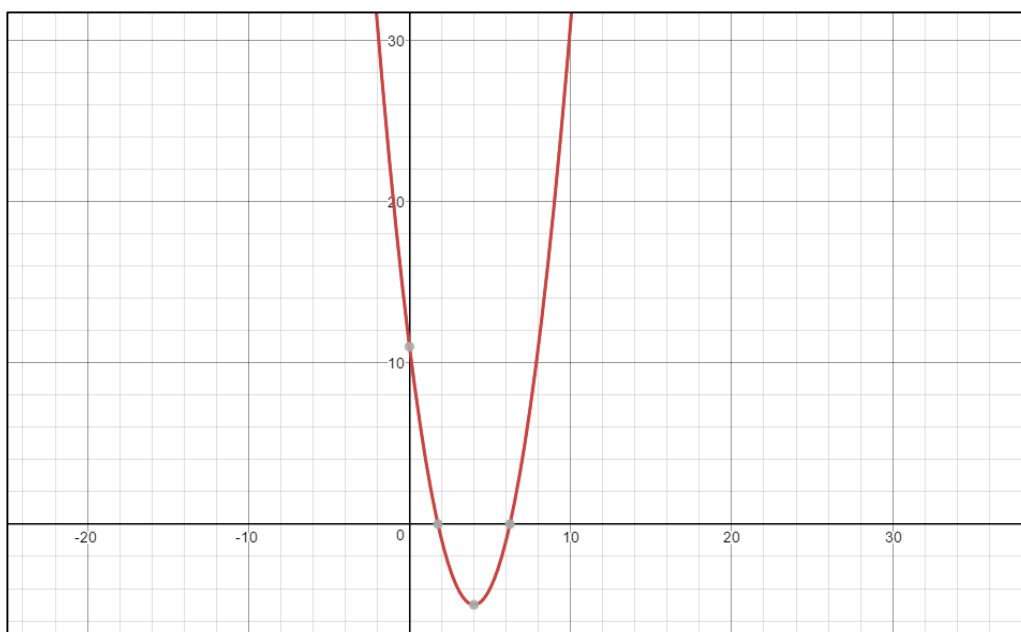
x	f(x)
-2	5
-1	4
0	5
1	8
2	13

3. Graph $f(x) = 2(x - 2)^2 - 1$.
Vertex = $(2, -1)$



x	f(x)
-2	31
-1	17
0	7
1	1
2	-1

4. Graph $f(x) = (x - 4)^2 - 5$.
Vertex = $(4, -5)$



x	f(x)
-2	31
-1	20
0	11
1	4
2	-1

Sketch the parabolas using the intercepts method.

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

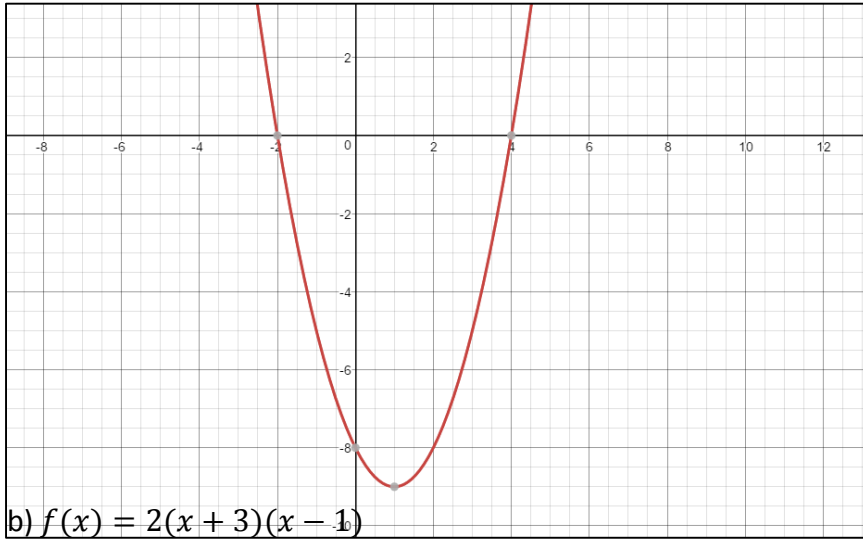
X-intercepts: $(-2, 0), (4, 0)$

Vertex: $(1, -9)$

axis of symmetry: $x = 1$

Y-intercept: $(0, -8)$

other points: $(-1, -5), (2, -8)$



b) $f(x) = 2(x + 3)(x - 1)$

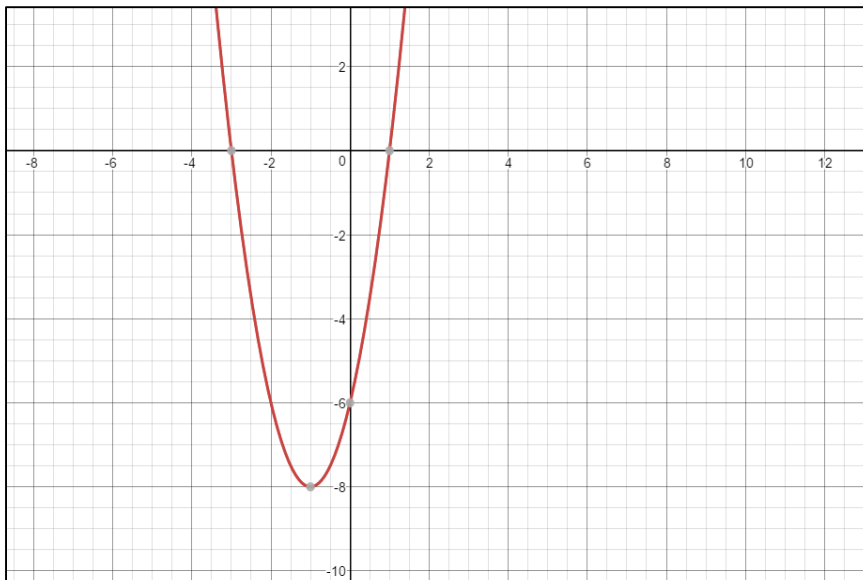
X-intercepts: $(-3, 0), (1, 0)$

Vertex: $(-1, -8)$

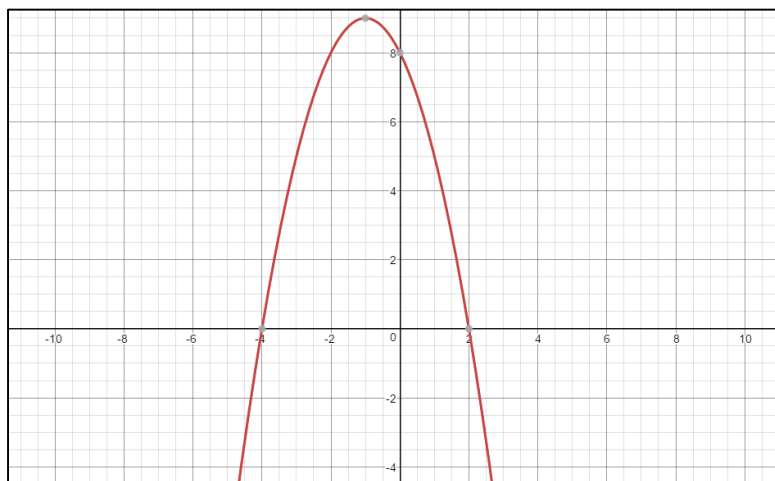
axis of symmetry: $x = -1$

Y-intercept: $(0, -6)$

other points: $(-2, -6), (2, 10)$



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

X-intercepts: $(-4, 0), (2, 0)$ Vertex: $(-1, 9)$ axis of symmetry: $x = -1$ Y-intercept: $(0, 8)$ other points: $(-2, 8), (1, 5)$ 

d) $f(x) = -\frac{1}{2}(x + 2)(x - 4)$

X-intercepts: $(-2, 0), (4, 0)$ Vertex: $(1, 4.5)$ axis of symmetry: $x = 1$ Y-intercept: $(0, 4)$ other points: $(-1, 2.5), (2, 4)$ 