

Group Quiz 10 Chapter 6

1. Let $f(x) = -2(x + 3)^2 + 4$ be a quadratic function written in vertex form.

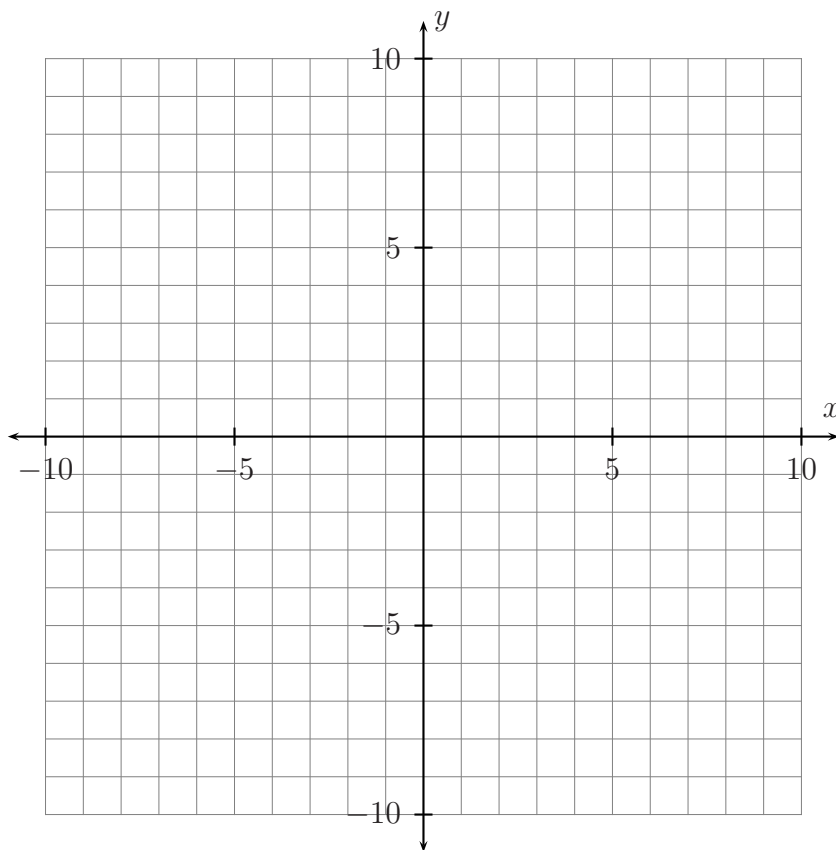
(a) What is the vertex?

(b) Does it open up or down?

(c) Is it wider or narrower than $y = x^2$?

(d) Write the function in standard form as $f(x) = ax^2 + bx + c$, then write the y -intercept.

(e) Graph the parabola on the grid below. Plot at least 3 points exactly aside from the vertex.



2. Expand the following:

(a) $(x - 7)^2$

(b) $(4x - 1)(6x + 5)$

(c) $3(4x - 6)(4x + 6)$

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

(e) $(x^2 + 3)(x^2 - 5)$

3. Factor the following:

(a) $-16x^2 + 24x$

(b) $4x^2 - 25$

4. Factor the following:

(a) $x^2 + 2x - 48$

(b) $10x^2 - 90$

5. Factor the following:

(a) $6x^2 + 2x - 12$

(b) $6x^2 + 34x - 12$