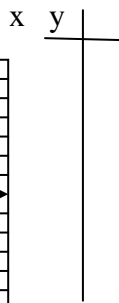
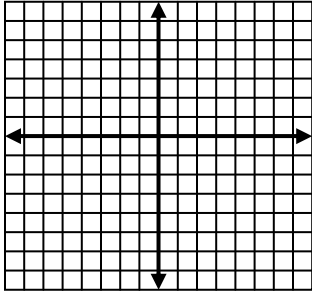


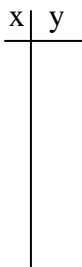
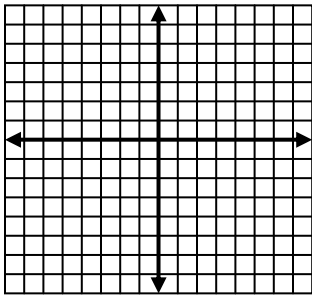
Accurately graph the parabola. State the vertex, domain, range, axis of symmetry, "a" value, and direction.

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



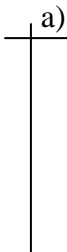
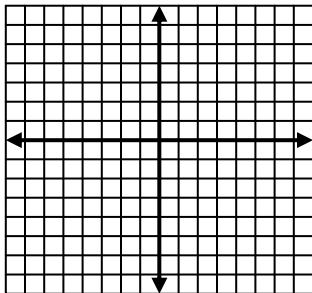
- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

2. $x = y^2 - 2$



- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

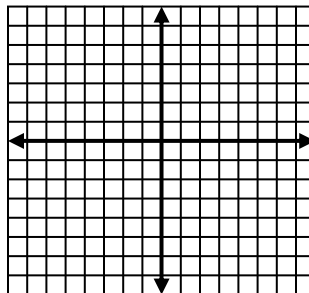
3. $x + 4 = 2(y - 2)^2$



- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

Not everything is in standard form, so you must complete the square to put it into standard form.

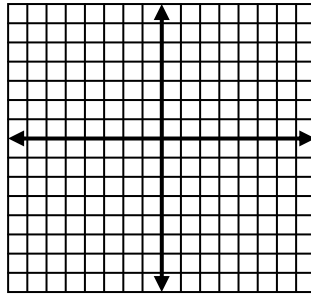
4. $x^2 + 4x - y + 1 = 0$



- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

Standard form:

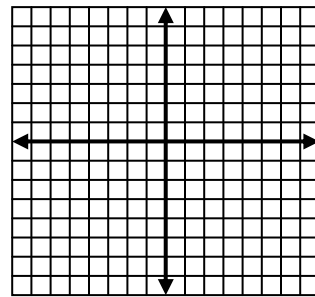
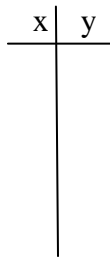
5. $y^2 + 2y + x - 3 = 0$



- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

Standard form:

6. $2x^2 + 4x + y - 2 = 0$



- a) the vertex(,)
- b) the axis of symmetry
- c) domain
- d) range
- e) "a" value
- f) direction of opening

Standard form:

Put in standard form only.

7. $3x^2 - 18x - y + 21 = 0$

8. $x + 2y - y^2 - 3 = 0$

Standard form:

Standard form: