Unit 2A: Quadratic Transformations and Factoring

Name:

Day 2 Hw Quadratic Transformations and Vertex Form

Part 1: Write the quadratic equations to describe each of the given transformations of $y = x^2$.

1. shift 1 unit to the right and 5 units down

$y = (x-6)^2 - 5$

2. reflect over the x-axis, then shift 4 units to the left

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

3. stretch horizontally by a factor of 3, then shift 10 units down

$y = 3x^2 - 10$

4. reflect over the x-axis, then shift 2 units down and 5 units to the right

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

Part 2: State the vertex for each of the following parabolas.

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

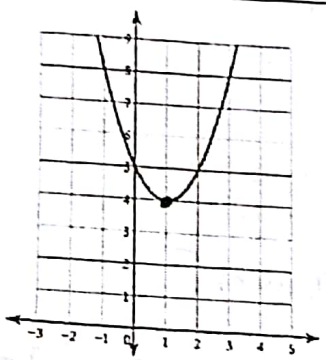
2. $y = (x-2)^2 + 9$ $(2, 9)$

3. $y = x^2 + 4$ $(0, 4)$

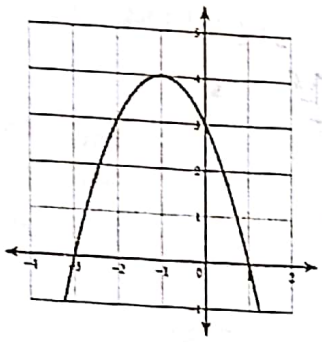
4. $y = 3(x-6)^2$ $(6, 0)$

Part 3: Write an equation for each of the parabolas given.

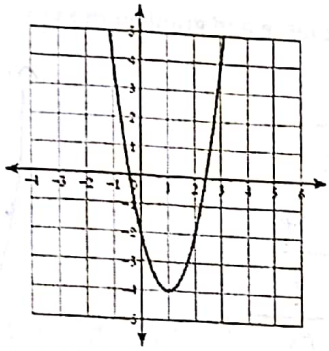
15. $y =$ $(x-1)^2 + 4$



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



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



Unit 2A: Quadratic Transformations and Factoring

Name:

Part 4: Match each equation to its graph below.

C 18. $y = (x+2)^2 - 1$

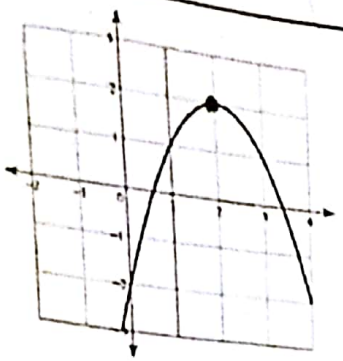
B 20. $y = 2(x+1)^2 - 1$

A 19. $y = -(x-2)^2 + 2$

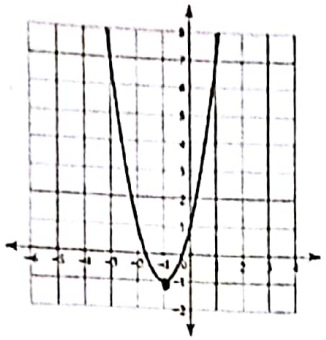
D 21. $y = (x-1)^2 - 1$

E 22. $y = -2(x-1)^2 + 2$

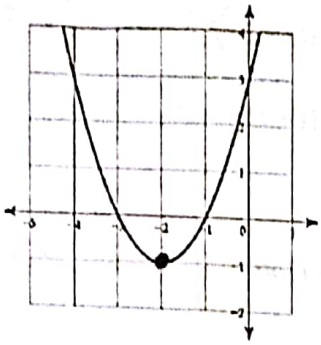
a



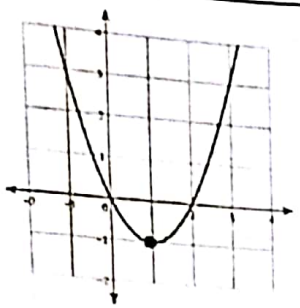
b



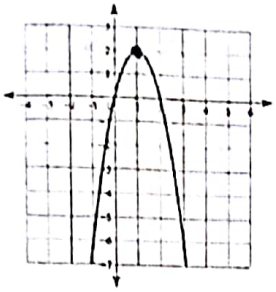
c



d



e



Day 3 Hw: Intercept form and Standard form

Part 1: Match each parabola with its graph below.

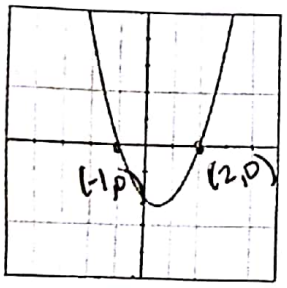
a 1) $y = (x+1)(x-2)$

C 2) $y = -(x-1)(x-2)$

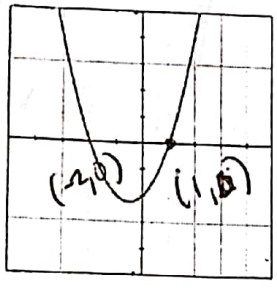
d 3) $y = -(x+1)(x+2)$

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

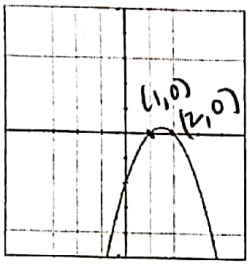
a.



b.



c.



d.