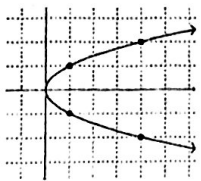


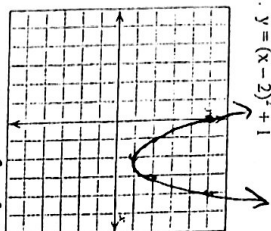
Quadratics Worksheet 1

Graph: plot the vertex and 4 more points (2 on each side of vertex)

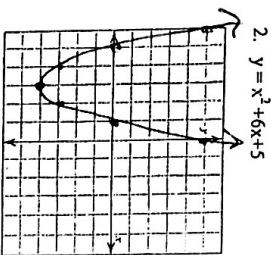
Parent Function $y = x^2$



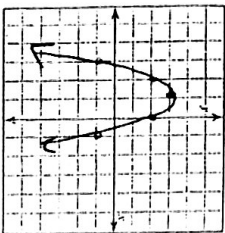
1. $y = (x-2)^2 + 1$



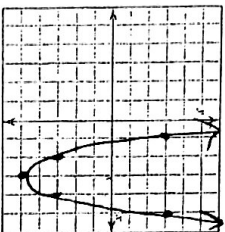
2. $y = x^2 + 6x + 5$



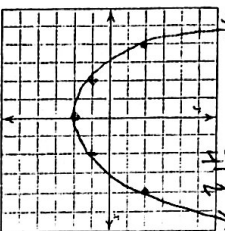
3. $y = -(x+1)^2 + 3$



4. $y = 2x^2 - 12x + 13$



5. $y = \frac{1}{4}(x)^2 - 2$



Put the following in standard form $f(x) = ax^2 + bx + c$. Name the vertex and axis of symmetry!

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

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

$x^2 - 3x - 3x + 9 + 4$

$x^2 - 6x + 13$

Vertex $(3, 4)$

AOS $x = 3$

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

$(x+1)(x+1) - 3$

$x^2 + 1x + 1x - 3$

$x^2 + 2x - 2$

Vertex $(-1, -3)$

AOS $x = -1$

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

$2(x-4)(x-4) - 3$

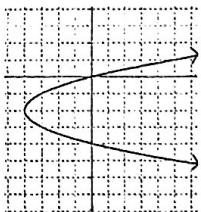
$2x^2 - 8x + 16 - 3$

$2x^2 - 16x + 13$

Vertex $(4, -3)$

AOS $x = 4$

Solve by Graphing:



9. Name the vertex of the graph $(2, -4)$

Name the axis of symmetry $x = 2$

What are the x-intercepts? $(0,0)$ $(4,0)$

Write the equation $y = (x-2)^2 - 4$

Solve by Graphing:

10. $y = (x-3)^2 - 1$

Parent Function $y = x^2$

$(2,0)$ $(4,0)$

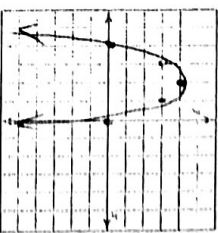
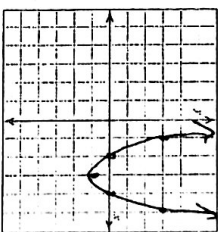
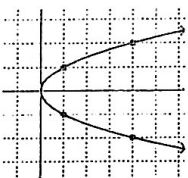
Vertex $(3, -1)$

11. $y = x^2 - 4x$

$(0,0)$ $(4,0)$

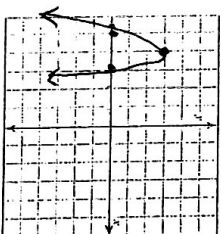
$-\frac{b}{2a} = \frac{-(-4)}{2(1)} = 2$

$y = -2$



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

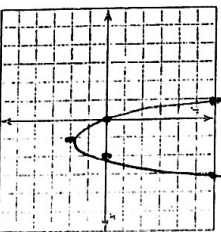
x-intercepts: $(-3,0)$ $(-5,0)$



Vertex $(-4, 3)$

13. $y = 2x^2 - 4x$

$(0,0)$ $(2,0)$

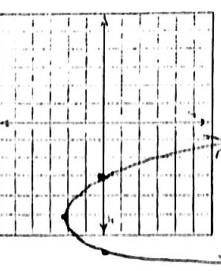


$-\frac{b}{2a} = \frac{-(-4)}{2(2)} = 1$

$y = -2$

14. $y = \frac{1}{2}(x-5)^2 - 2$

$(3,0)$ $(7,0)$



Vertex $(5, -2)$