

Aim: How do we graph linear and quadratic functions?

I. Do Now:

1. Find the domain:

(a) $f(x) = \frac{1}{\sqrt{3-x}}$

(b) $g(x) = \frac{\sqrt{x+2}}{x-2}$

2. Given $2x + 3y = 6$.

(a) Solve for y .

(b) Identify m and b .

$m =$ _____
(what does m represent?)

$b =$ _____
(what does b represent?)

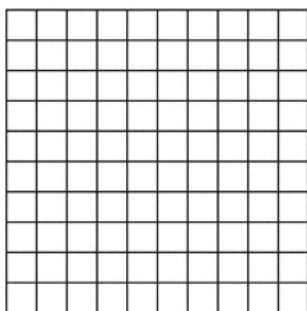
3. Complete the table of values:

x	0	1	2	3	4
$y = x^2$					

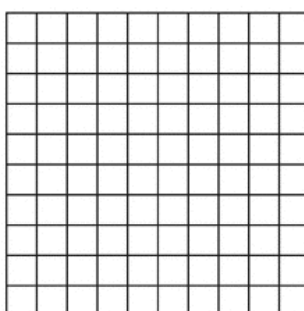
Δy

II. Graphs of Linear Equations. Solve for y , if necessary, then graph each equation.

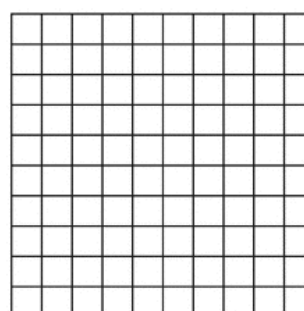
4. $y = \frac{1}{2}x$



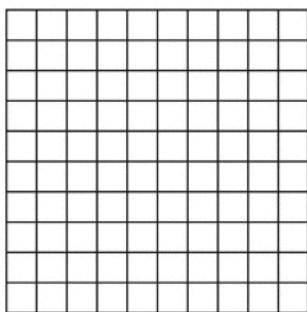
5. $y = -2$



6. $x = -1$



7. $x - 2y = 8$

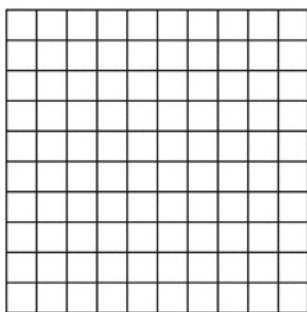


III. Graphing Parabolas $y = ax^2 + bx + c$ [$1a, 3a, 5a$ method]

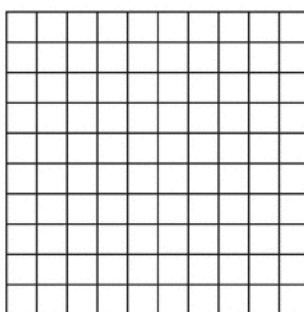
Procedure:

1. Find axis of symmetry $x = \frac{-b}{2a}$ (x -coordinate of vertex)
2. Find y -coordinate by substituting the value found in step 1 into the equation.
3. Find $1a, 3a, 5a, \dots$ and use these values to plot more points.
4. Connect points to form parabola and use $(0, c)$ as a check point.

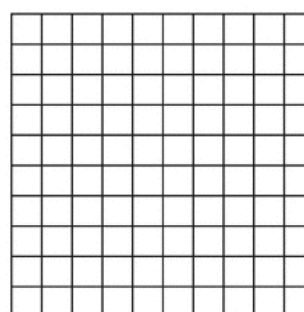
8. $y = x^2 - 4x + 3$



9. $y = 2x^2 + 8x + 8$



10. $y = -3x^2 + 3x + 6$



HW13 (use graph paper)
 Find the domain: (a) $f(x) = \frac{10}{x^2 - 2x}$ (b) $f(x) = \frac{1}{\sqrt{x^3 - x^2}}$
 p. 66: 59 (ignore directions, just graph)
 p. 77: 7, 8, 11, 12