

3.1  
Linear or not?

$$y = |x+2|$$

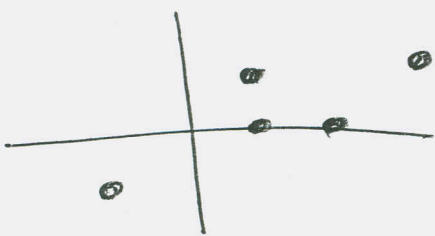
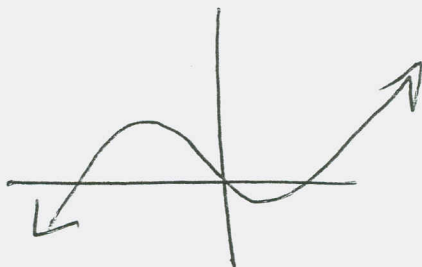
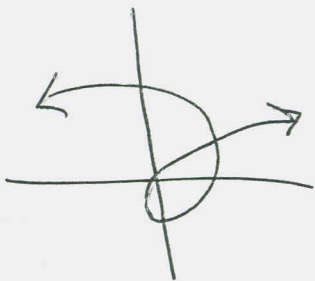
$$x - y = 7$$

$$x^2 + y = 11$$

$$f(x) = 3x - 2$$

3.2  
Function or not?  $\mathcal{D} \subseteq \mathcal{R}$ ?

$\{(\pi, 0), (0, \pi), (-2, 4), (4, -2)\}$



$$x = |y|$$

$$x = y^2$$

$$x^2 = y$$

$f(x) = -\frac{1}{3}x$ , what's  $f(7)$ ? what's  $f(\square)$ ?  
write two corresponding ordered pairs

### S 3.3

Graph each linear function. If it has only one intercept, use one more point; otherwise, just label the x- & y-intercepts

$$f(x) = 2x + 6$$

$$f(x) = 7$$

$$f(x) = \frac{1}{3}x - 2$$

Graph each line by finding intercepts

$$x - y = 3$$

$$3x - 4y = 7$$

$$x = 5y$$

$$x = 3$$

$$y = -3$$

### S 3.4

Graph by using slope & y-intercept.

$$y = \frac{1}{3}x + 2$$

$$2x - 3y = 5$$

Find the slope of each line

$$y = \frac{1}{3}x + 2,$$

$$2x - 3y = 5$$

$$x = 5$$

$$y = 3$$

Find slope between the points  
(2, 3), (-5, 8)      (2, 5), (3, 5)      (3, 2), (3, -7)

3.5  
Find an equation of the line thru  
the given points

$$(2, 3), (-5, 8)$$

$$(2, 5), (3, 5)$$

$$(3, 2), (3, -7)$$

Write answers to the previous in slope-  
intercept form (if possible)

Write answers to the previous in standard  
form with integer coefficients

Find an equation of the line parallel  
to each of the following lines, thru  
the given point.

$$y = \frac{2}{3}x - 7 \quad (5, 2)$$

$$3x + 7y = 8 \quad (-2, -3)$$

$$x = 5 \quad (3, 7)$$

$$y = 11 \quad (3, 7)$$

Same question but PERPENDICULAR  
instead of parallel.

3.6 Graph. State Domain and Range.

$$f(x) = \begin{cases} 2x + 4 & \text{if } x \leq -2 \\ 1 & \text{if } x = -1 \\ -\frac{4}{5}x + 2 & \text{if } x > 0 \end{cases}$$

Graph. Show stages. State  $\mathcal{D}$  &  $\mathcal{R}$ .

$$g(x) = \sqrt{x-3} + 5$$

$$g(x) = |x+3| + 6$$

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

$$g(x) = -(x+3)^2 - 5$$

3.7 Graph the inequalities

$$x \geq -3$$

$$y \leq 5$$

$$x+y \leq 5$$

$$3x+2y \leq 6$$

Graph the SYSTEM of inequalities

$$3x+2y \leq 6$$

$$x-2y \leq -4$$

$$x \geq 0$$

$$y \geq 0$$