

4.7 cont.

on Graph Paper

Feb. 13, 2007

Parallel Lines: different Lines in the Same Plane that Never intersect.

Line A

$$\begin{array}{r} -x + 2y = 6 \\ +x \quad +x \\ \hline 2y = x + 6 \\ \frac{2y}{2} = \frac{x+6}{2} \\ y = \frac{1}{2}x + 3 \\ y = mx + b \end{array}$$

Line B

$$\begin{array}{r} -x + 2y = -2 \\ +x \quad +x \\ \hline 2y = -x - 2 \\ \frac{2y}{2} = \frac{-x-2}{2} \\ y = -\frac{1}{2}x - 1 \\ y = mx + b \end{array}$$

Line C

$$\begin{array}{r} x + 2y = 4 \\ -x \quad -x \\ \hline 2y = -x + 4 \\ \frac{2y}{2} = \frac{-x+4}{2} \\ y = -\frac{1}{2}x + 2 \\ y = mx + b \end{array}$$

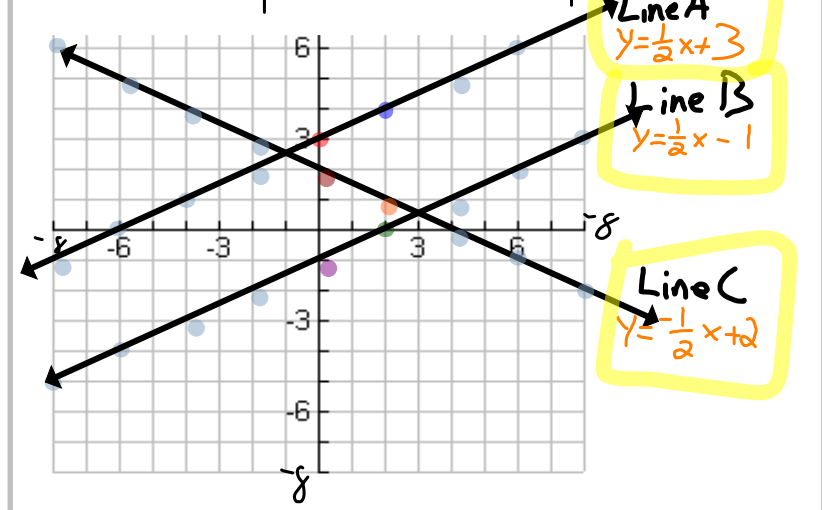
$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{1}{2}$   
 Up 1  
 Right 2

$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{1}{2}$   
 Up 1  
 Right 2


$m = \text{slope} = \frac{\text{rise}}{\text{run}} = -\frac{1}{2}$   
 Down 1  
 Right 2

$b = y\text{-int} = 3 \Rightarrow (0, 3)$      $b = y\text{-int} = -1 \Rightarrow (0, -1)$      $b = y\text{-int} = 2 \Rightarrow (0, 2)$



Which are Parallel?

Lines A + Line B

Why? Because they  
have the same slope of  $\frac{1}{2}$  +  
different y-int. + they  
are on the same Plane! 

O.T.L.

① Pg 246: 1-10 (all)  
11, 12, 14, 15, 35, 37, 39, 41

Same  
Coord. Plane.

① Correct the above.

② 43-45 (all); 49-52 (all)

# Review Packet

Chapter 4 Test Friday!