

October 16, 2017  
 \* Quiz #5 - Week  
 Linear Equations

WE #2  
 #15)  $(3, 1)$ ;  $m = \frac{1}{2}$

a)  $y = mx + b$   
 $(1) = \frac{1}{2}(3) + b$   
 $2(1 = \frac{3}{2} + b)$   
 $2 = 3 + 2b$   
 $\frac{-1}{2} = \frac{2b}{2}$   $y = \frac{1}{2}x - \frac{1}{2}$   
 $-\frac{1}{2} = b$   $\downarrow$  s. x.  
 $2y = x - 1$   
 $-x + 2y = -1$   
 $x - 2y = 1$

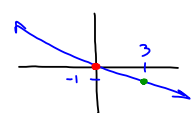
Oct 16-8:53 AM

$Ax + By = C$  s. 2.

$y = -\frac{A}{B}x + \frac{C}{B}$

$y = mx + b$

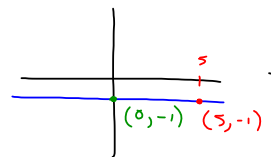
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WE #1  
 #8)   $(0, 0)$  &  $(3, -1)$

$m = \frac{(-1) - (0)}{(3) - (0)} = \frac{-1}{3} = -\frac{1}{3}$

$y = -\frac{1}{3}x + 0$   
 $y = -\frac{1}{3}x$   
 $3y = -x + 0$   
 $x + 3y = 0$  s. 2.

Oct 16-9:17 AM

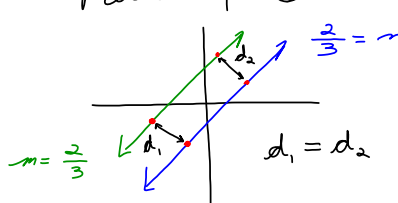
WE #1  
 #5)   $(0, -1)$  &  $(5, -1)$

$m = \frac{(-1) - (-1)}{(5) - (0)} = \frac{-1 + 1}{5} = \frac{0}{5} = 0$

$y = 0x - 1$   
 $y = -1$   
 $0x + y = -1$

Oct 16-9:21 AM

Parallel Lines

  $m = \frac{2}{3} = m$   
 $d_1 = d_2$

#17)  $(4, 2)$ ; parallel to  $y = -\frac{3}{4}x - 5$   
 $m = -\frac{3}{4}$   
 $y = mx + b \Rightarrow y = -\frac{3}{4}x + 5$   
 $2 = -\frac{3}{4}(\frac{4}{1}) + b$   $4y = -3x + 20$   
 $5 = b$   
 $3x + 4y = 20$

Oct 16-9:31 AM

Slope

#20  $x = 1$   
 slope: undefined

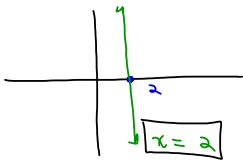
a.  $x = -23$  (Vertical line)  
 why is the slope undefined?

b.  $y = -6$  (Horizontal line)  
 why is the slope 0?

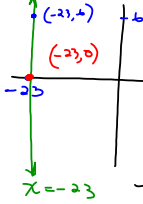
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#18)  $(-3, -3)$ ; parallel to  $y = \frac{2}{3}x + 3$   
 $m = \frac{2}{3}$   
 $-3 = \frac{2}{3}(-3) + b$   
 $-3 = -2 + b$   $\left( y = \frac{2}{3}x + 4 \right)$   
 $4 = b$   
 $3y = 7x + 12$   
 $-7x + 3y = 12$   
 $7x - 3y = -12$

Oct 16-9:40 AM

#14)  $(2, 5)$ ;  $m = \text{undefined}$   


Oct 16-9:45 AM

$x = -23$   
  
 $(-23, 4) \neq (-23, 0)$   
 $m = \frac{(0) - (4)}{(-23) - (-23)}$   
 $= \frac{-4}{0}$

Oct 16-9:29 AM