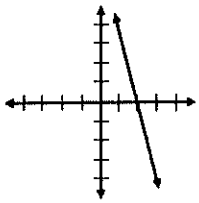
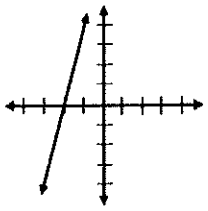
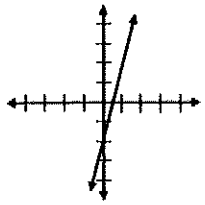
Practice
Equations of Lines: Slope and y-intercept

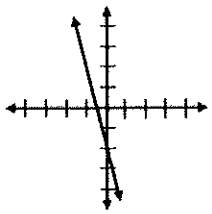
Answer these problems, then check your answers using the key on the next page. If you missed something, look at the solutions after the answer key, and if you still don't understand, watch the review video again.

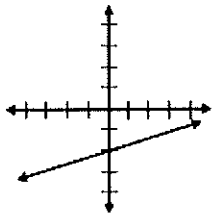
#1) The function $y = 4x - 2$ is represented by which graph?

a) 

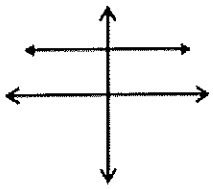
b) 

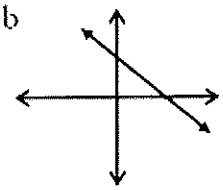
c) 

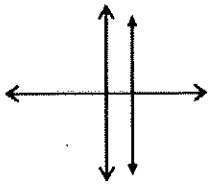
d) 

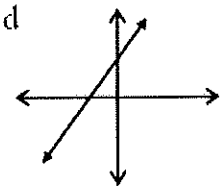
e) 

#2) State whether each graph's slope is positive, negative, zero, or undefined:

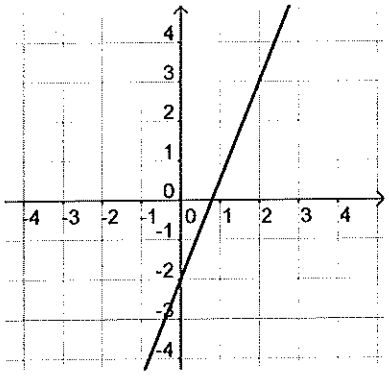
a 

b 

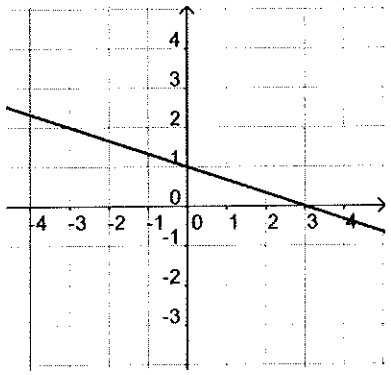
c 

d 

#3) What is the slope of this graph?



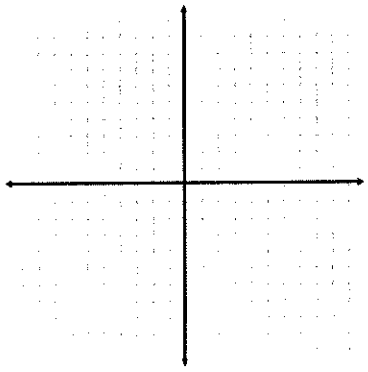
#4) What is the slope of this graph?



#5) Find the slope and y-intercept, and graph: $2x + 3y = 24$

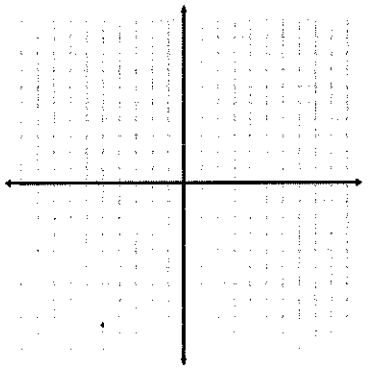
slope

y-intercept



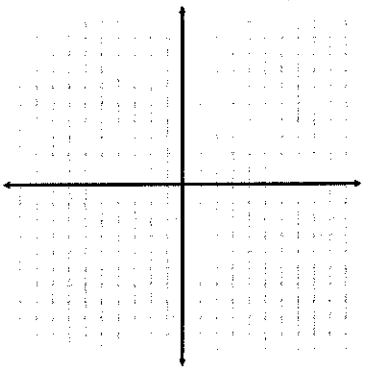
#6) Find the slope and y-intercept, and graph: $4x - y - 5 = 0$

slope y-intercept



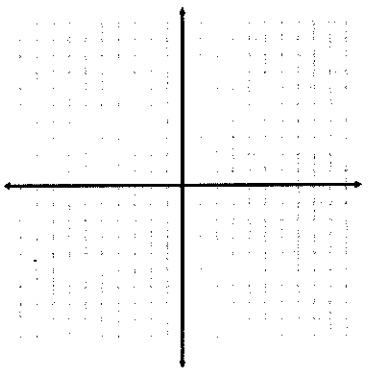
#7) Find the slope and y-intercept, and graph: $2y + 16 = 0$

slope y-intercept



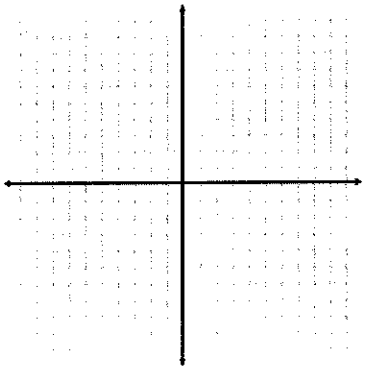
#8) Find the slope and y-intercept, and graph: $3x = 9$

slope y-intercept



#9) Find the slope and y-intercept, and graph: $4x - (2y - 6) = 0$

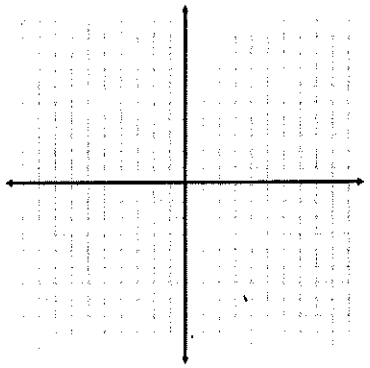
slope y-intercept



#10) Find the slope and y-intercept, and graph: $y = \frac{5}{6}x - 1$

slope

y-intercept



Answers:

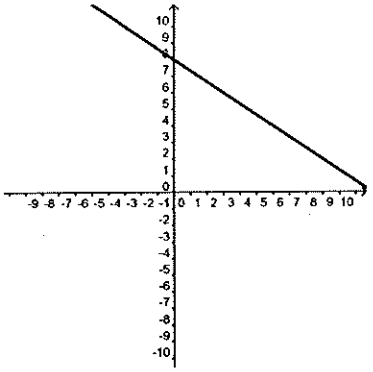
#1) c

#2) a) zero b) negative c) undefined d) positive

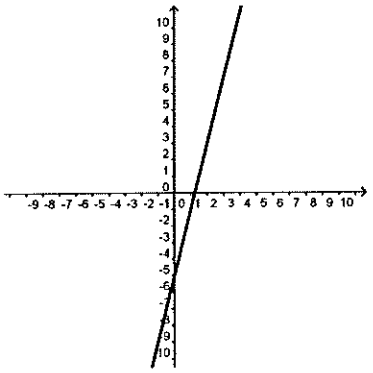
#3) $slope = \frac{5}{2}$

#4) $slope = -\frac{1}{3}$

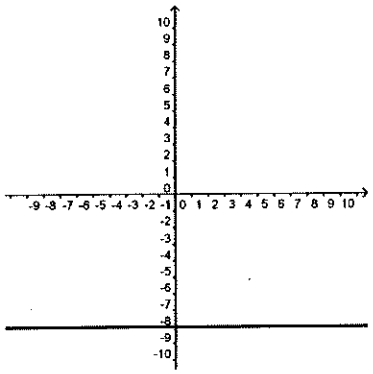
#5) $slope: -\frac{2}{3}$ $y\text{-}intercept: (0, 8)$



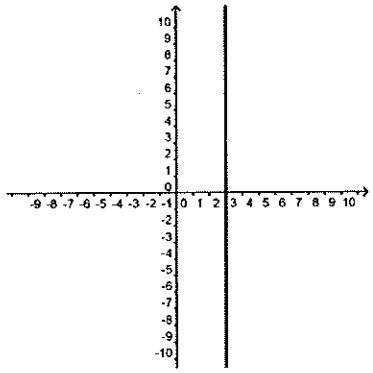
#6) $slope: 4$ $y\text{-}intercept: (0, -5)$



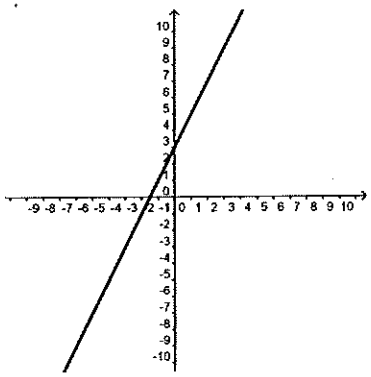
#7) $slope: 0$ $y\text{-}intercept: (0, -8)$



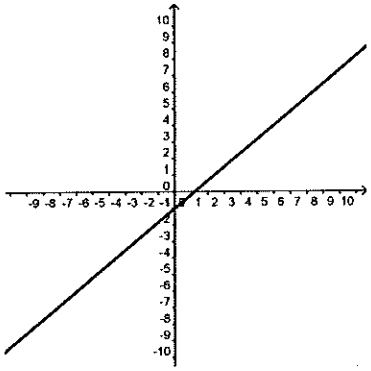
#8)
slope : *undefined* *y - intercept* : *no y - intercept*



#9) *slope* : 2 *y - intercept* : $(0, 3)$



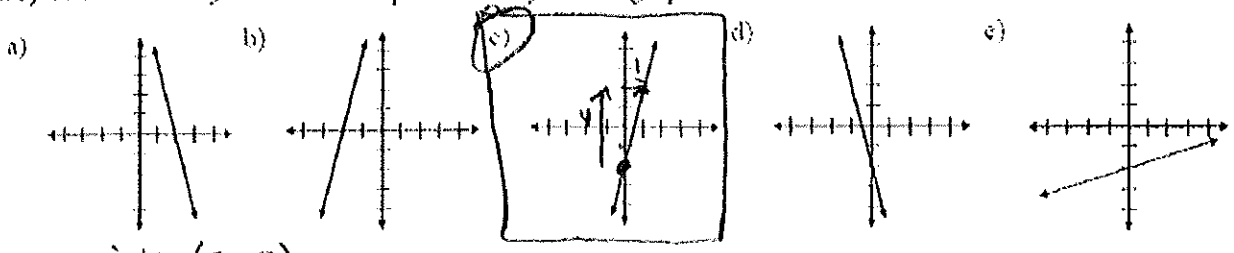
#10) *slope* : $\frac{5}{6}$ *y - intercept* : $(0, -1)$



Solutions:

#1) The function $y = 4x - 2$ is represented by which graph?

a) b) c) d) e)

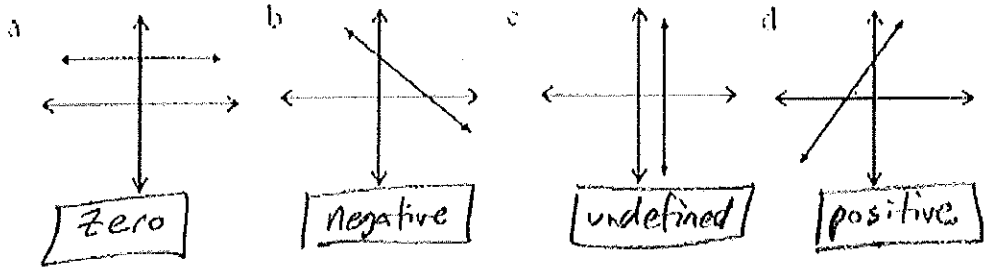


y-int: $(0, -2)$

slope: 4

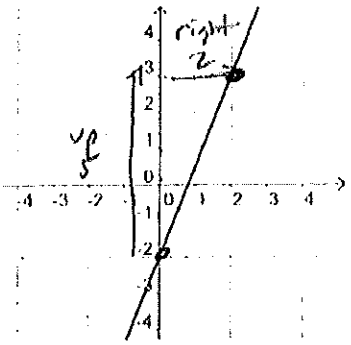
#2) State whether each graph's slope is positive, negative, zero, or undefined:

a b c d



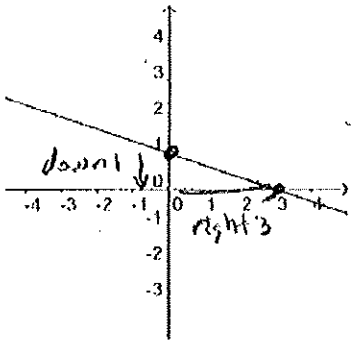
Zero | negative | undefined | positive

#3) What is the slope of this graph?



slope = $\frac{5}{2}$

#4) What is the slope of this graph?



slope = $\frac{-1}{3}$

#5) Find the slope and y-intercept, and graph: $2x + 3y = 24$

convert to $y = mx + b$ form:

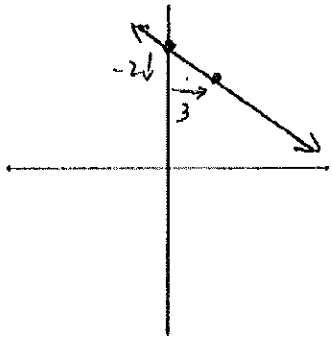
$2x + 3y = 24$

$-2x \quad -2x$

$\frac{3y}{3} = \frac{-2x}{3} + \frac{24}{3}$

$y = -\frac{2}{3}x + 8$

slope: $-\frac{2}{3}$ | y-intercept: $(0, 8)$

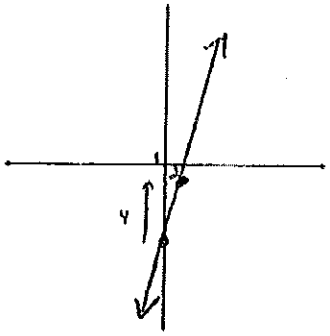


#6) Find the slope and y-intercept, and graph: $4x - y - 5 = 0$

$4x - y - 5 = 0$
$+y \quad +y$
$4x - 5 = y$
$y = 4x - 5$

slope: slope = 4

y-intercept: (0, -5)

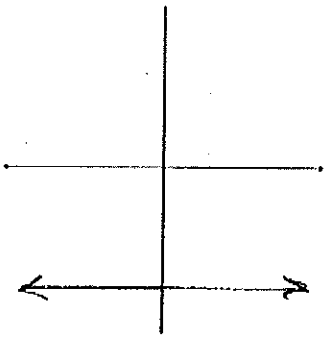


#7) Find the slope and y-intercept, and graph: $2y + 16 = 0$

$2y + 16 = 0$
$-16 \quad -16$
$\frac{2y}{2} = \frac{-16}{2}$
$y = -8$

slope: no x-term, slope = 0, horizontal line

y-intercept: (0, -8)

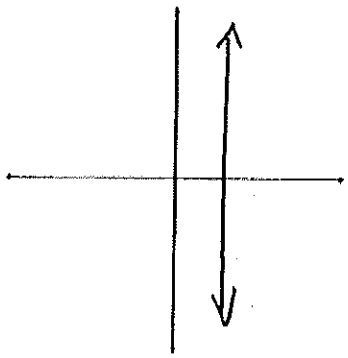


#8) Find the slope and y-intercept, and graph: $3x = 9$

$\frac{3x}{3} = \frac{9}{3}$
$x = 3$

slope: no y-term, vertical line, slope undefined

y-intercept: no x-intercept

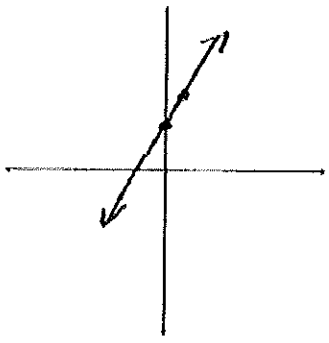


#9) Find the slope and y-intercept, and graph: $4x - (2y - 6) = 0$

$4x - (2y - 6) = 0$
$4x - 2y + 6 = 0$
$+2y \quad +2y$
$4x + 6 = 2y$
$\frac{2y}{2} = \frac{4x + 6}{2}$
$y = 2x + 3$

slope: slope = 2

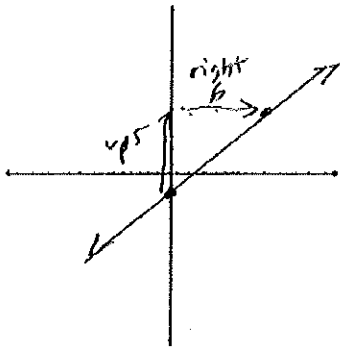
y-intercept: (0, 3)



#10) Find the slope and y-intercept, and graph: $y = \frac{5}{6}x - 1$

slope → $\frac{5}{6}$; y-int → -1

slope	y-intercept
slope $= \frac{5}{6}$	$(0, -1)$



up 5
right 6