Homework

P. 230, # 45

(x) - small bottles = $.04 = 4

(y) large " = $.08 = 8

total amount = $.56 = 56

$4x + 8y = 56$

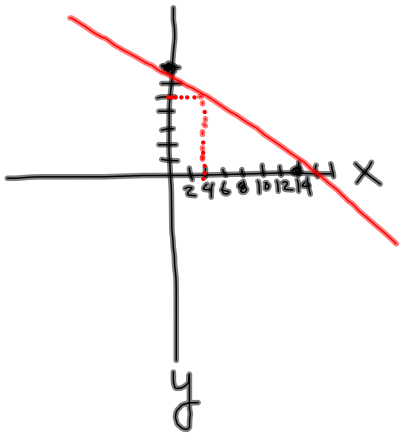
$x = 0$ $\quad 4(0) + 8y = 56$

$\frac{8y}{8} = \frac{56}{8}$

(y int.) $\quad y = 7$

$y = 0$ $\quad \frac{4x}{4} + 8(0) = \frac{56}{4}$

(x int.) $\quad x = 14$



$4x + 8y = 56$

0 small
7 large or

14 small
0 large

2 small
6 large

p. 331 #46

$2x + 24 = 128$

$2x = 104$

$x = 52$

32 field
64 free

63 field
2 free

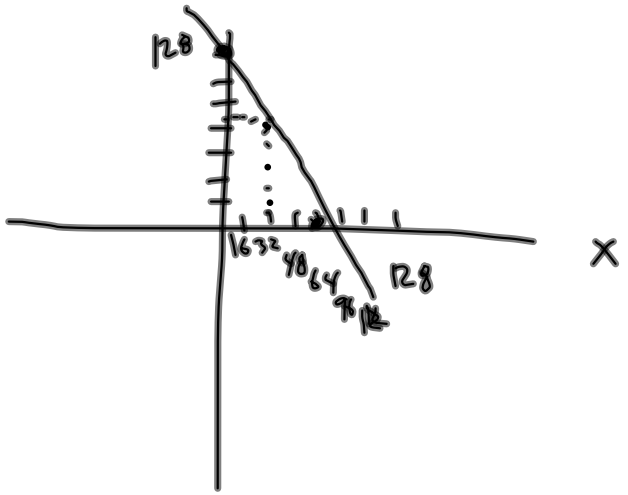
$2x + y = 128$

x = field goals

y = free throws

$x = 0 \quad y = 128$

$y = 0 \quad x = 64$

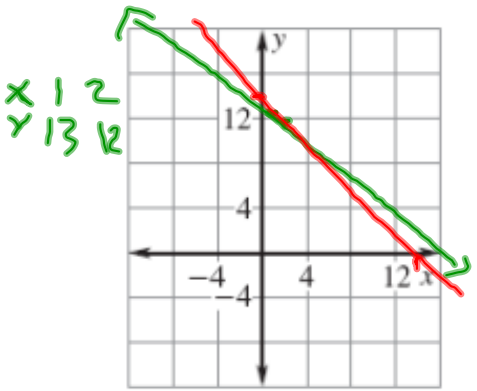


y intercept: team scored 128 all free throws

x intercept: team scored all field goals

Graph the equation.

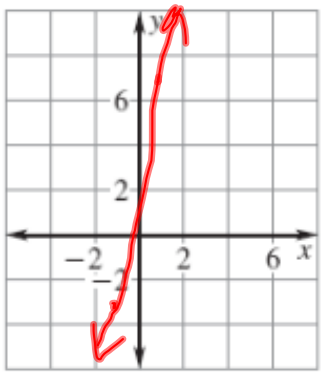
10. $y + x = 14$



11. $y - 5x = 2 + 5x$

$+5x$ $+5x$

x	y
1	7
−1	−3



$y = 5x + 2$

$5(1)+2 = 7$

$5(-1)+2 = -3$

x	y
0	5
−2	1

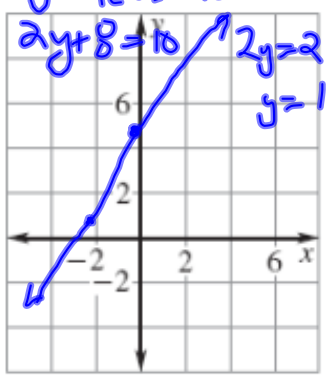
12. $2y - 4x = 10$

$2y - 4(2) = 10$

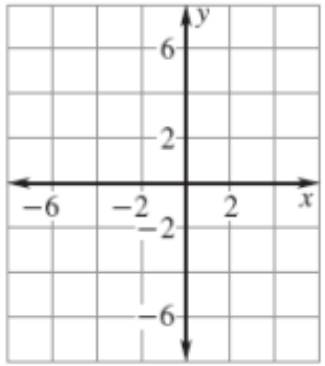
$2y + 8 = 10$

$2y = 2$

$y = 1$



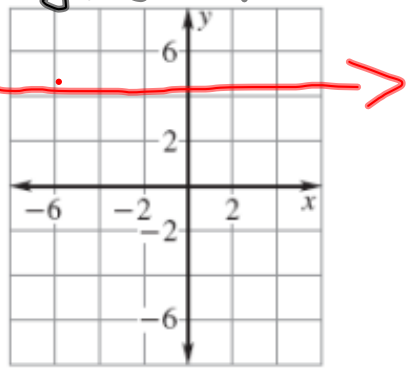
13. $x = -6$



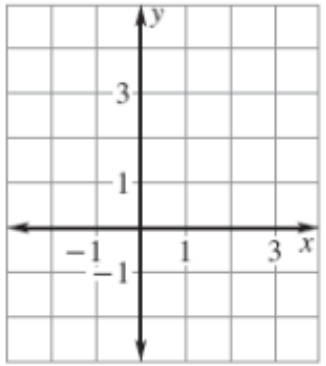
14. $y = 4$

$y + 0x = 4$

x	y
1	4
2	4
3	4

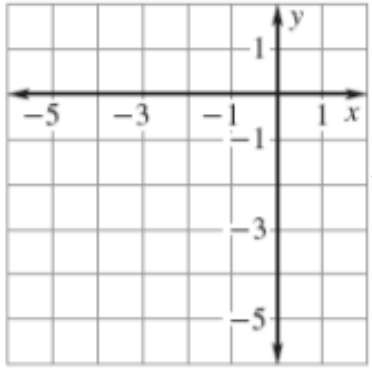


15. $3x - 2y = 0$



Graph the equation. Label the points where the line crosses the axes.

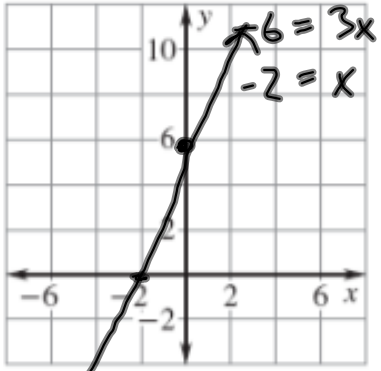
13. $y = -x - 4$



x	y
0	−4
−4	0

14. $y = 6 + 3x$

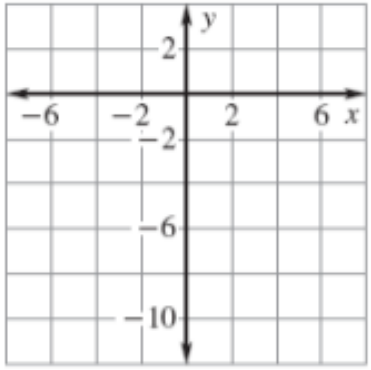
$0 = 6 + 3x$
$-6 \quad -6$
$-6 = 3x$
$-2 = x$



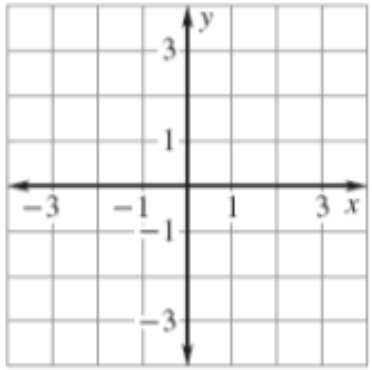
x	y
0	6
−2	0

$y = 6 + 3x$ (0)
$y = 6$

15. $y = 8x - 7$

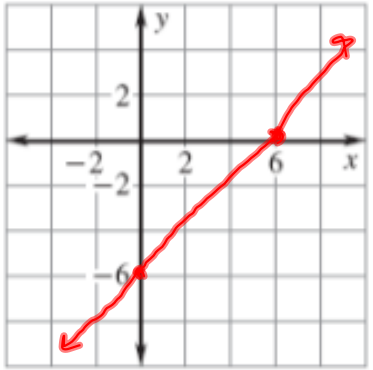


16. $y = 1 - 3x$

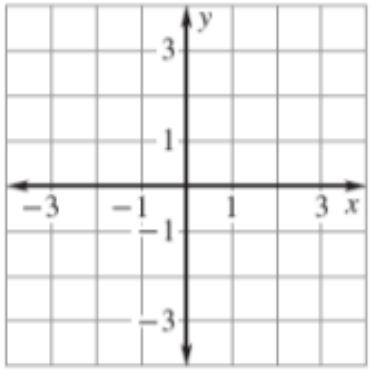


17. $7x - 7y = 42$

x	y
0	−6
6	0



18. $3y + 2x = -5$



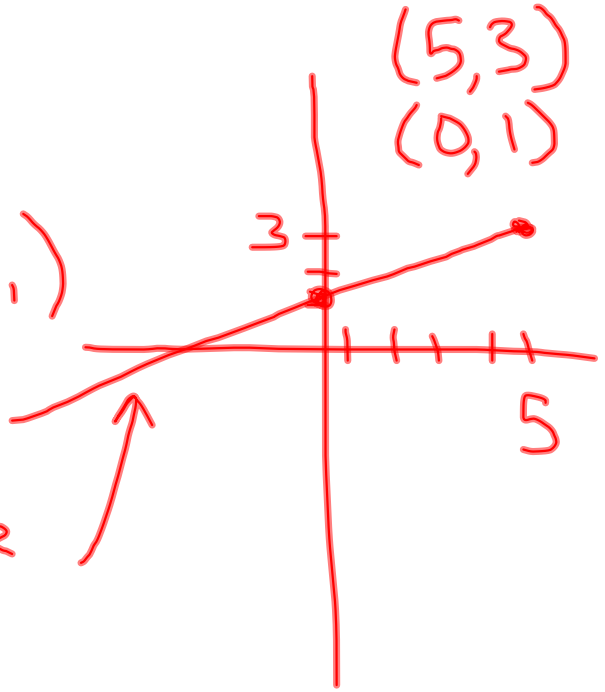
SLOPE:

- The "angle" of a line on a graph

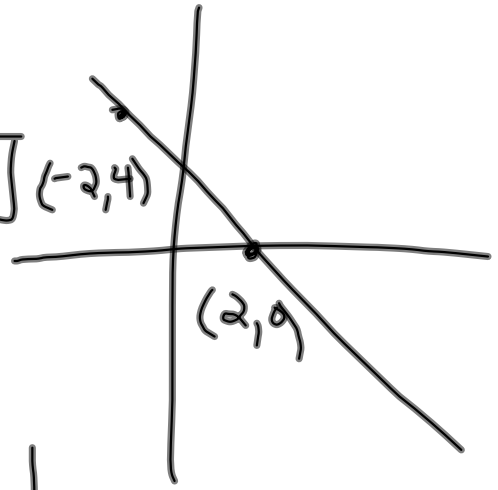
- $\frac{y_2 - y_1}{x_2 - x_1} = \underline{\text{slope}}$

(x_2, y_2) and (x_1, y_1)

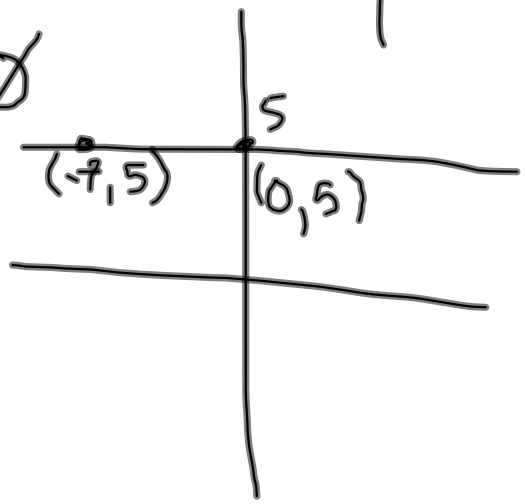
$\frac{(3-1)}{(5-0)} = \boxed{\frac{2}{5}}$ slope



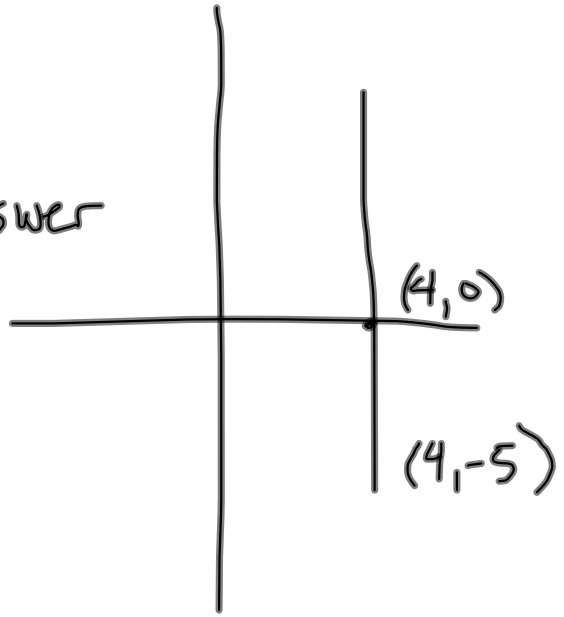
$$\text{slope} = \frac{4-0}{-2-2} = \frac{4}{-4} = \boxed{-1}$$



$$\text{slope} = \frac{(5-5)}{0-7} = \frac{0}{7} = \emptyset$$



$$\text{slope} = \frac{(0 - {}^{-}5)}{4 - 4} = \frac{5}{\emptyset} = \text{? no answer}$$



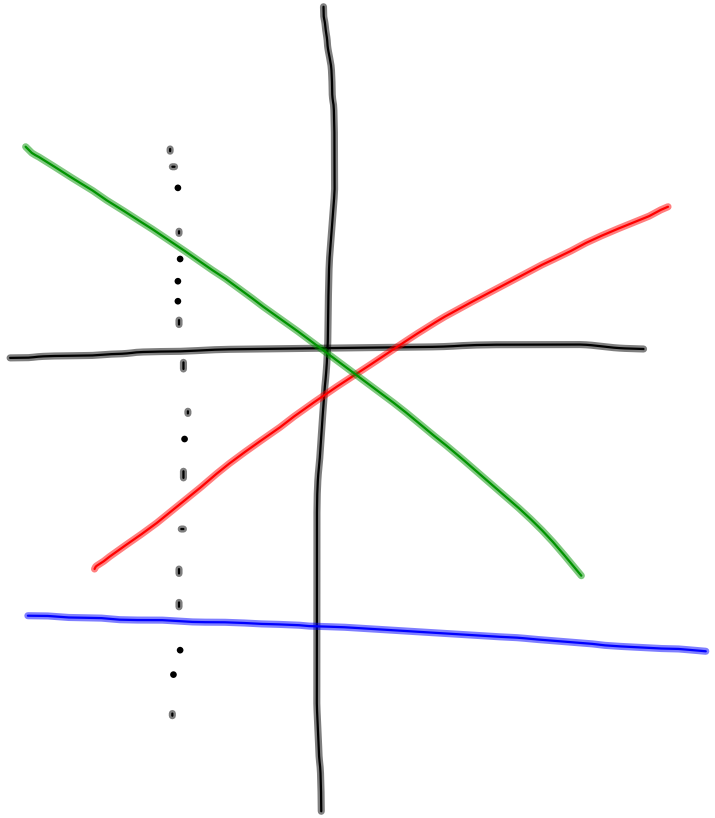
slope = undefined

Positive slope

Negative slope

Zero slope

undefined slope



Homework:

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