

# Slope

1.  $m = -2$

2.  $m = 1/3$

3.  $m = \text{undefined}$

4.  $m = .2$

5.  $m = \frac{55-15}{7-3} = \frac{40}{4} = 10$  miles in 1 minute

6.  $m = \frac{22.4-0}{14-0} = \frac{22.4}{14} = 1.6$  mm in 1 second

7.  $m = \frac{22-8}{30-9} = \frac{14}{21} = \frac{2}{3} = .\bar{6}$  pages in 1 minute

8.  $m = \frac{52.5-30}{7-4} = \frac{22.5}{3} = 7.50$  dollars for 1 ticket

9.  $m = \frac{10000-3750}{10-30} = \frac{6250}{-20} = -\frac{625}{2} = \text{falling } 312.5 \text{ ft. in } 1 \text{ second}$

10.  $(1, 4)$  and  $(-3, -2)$

$$m = \frac{4+2}{1+3} = \frac{6}{4} = \frac{3}{2} = 1\frac{1}{2}$$

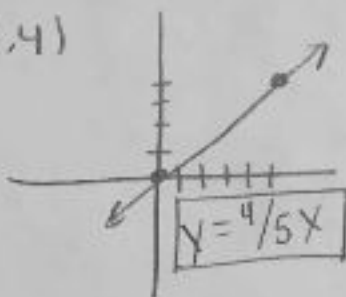
# Direct Variation

1. no

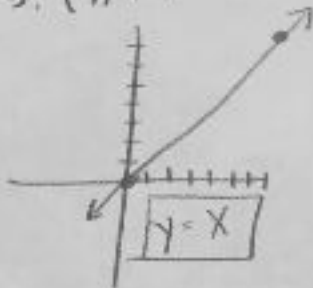
2.  $4y = x$   
 $y = \frac{1}{4}x$  Yes

3.  $\frac{y}{x} = 3$   
 $y = 3x$  Yes

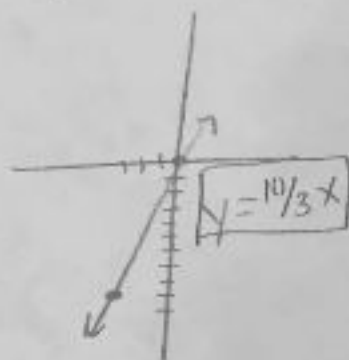
4. (5, 4)



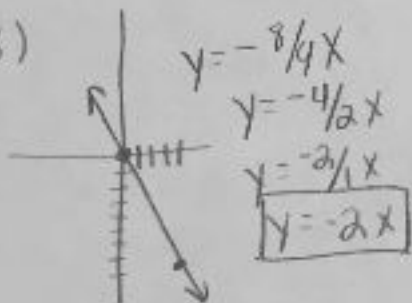
5. (7, 7)



6. (-3, -10)



7. (4, -8)



8.  $y = kx$   
 $25 = k(30)$

$y = \frac{5}{6}x$   
 $y = \frac{5}{6}(140)$

$\frac{25}{30} = k$

$\frac{5}{6} = k$

$y = 233 \frac{1}{3}$  miles

9.  $y = 4x$

$y = 4(13.4)$

$y = 53.6$  inches

Slope  
Intercept  
Form

1.  $m=6$  |  $y$  intercept  $(0, 8)$

2.  $3x+4y=-24$   
 $4y=-3x-24$   
 $y=-3/4x-6$  |  $m=-3/4$  |  $y$  intercept  $(0, -6)$

3.  $2y=8$   
 $y=4$  |  $m=0$  |  $y$  intercept  $(0, 4)$

4.  $m=-3/4$  |  $y$  intercept  $(0, 8)$

5.  $2y=3x-1$   
 $y=3/2x-1/2$  |  $m=3/2$  |  $y$  intercept  $(0, -1/2)$

6.  $4x-5y=2$   
 $-5y=-4x+2$   
 $y=4/5x-2/5$  |  $m=4/5$  |  $y$  intercept  $(0, -2/5)$

7.  $(-2, 4)$   $(3, 9)$   
 $m = \frac{9-4}{3-(-2)} = \frac{5}{5} = 1$

$y = mx + b$   
 $9 = 1(3) + b$   
 $9 = 3 + b$   
 $6 = b$  |  $y = x + 6$

8.  $(1, 6)$   $(9, -4)$   
 $m = \frac{-4-6}{9-1} = \frac{-10}{8} = -\frac{5}{4}$

$y = mx + b$   
 $6 = -\frac{5}{4}(1) + b$   
 $6 = -\frac{5}{4} + b$   
 $7\frac{1}{4} = b$

|  $y = -\frac{5}{4}(x) + 7\frac{1}{4}$

9.  $(0, 7)$  and  $(-1, 0)$   
 $m = \frac{0-7}{-1-0} = \frac{-7}{-1} = 7$

$y = mx + b$   
 $0 = 7(-1) + b$   
 $0 = -7 + b$   
 $7 = b$

|  $y = 7x + 7$

10.  $(7, 0)$   $(3, -4)$   
 $m = \frac{-4-0}{3-7} = \frac{-4}{-4} = 1$

$y = mx + b$   
 $0 = 1(7) + b$   
 $0 = 7 + b$   
 $-7 = b$

|  $y = x - 7$

11.  $(0, 0)$   $(-1, 1)$   
 $m = \frac{1-0}{-1-0} = -1$

$y = mx + b$   
 $0 = -1(0) + b$   
 $0 = b$

|  $y = -x$

12.  $(10, 0)$   $(0, 7)$

$$\frac{7-0}{0-10} = \frac{7}{-10}$$

$$y = mx + b$$
$$7 = -\frac{7}{10}(0) + b$$
$$7 = b$$

$$\boxed{y = -\frac{7}{10}x + 7}$$

13



14



15

$$y = mx + b$$

$$\boxed{y = 6x + 2575}$$

$$y - y_1 = m(x - x_1)$$

$$y - 6 = -5(x - 4)$$

$$y + 1 = 1(x - 3)$$

$$y - 5 = \frac{1}{2}(x - 8)$$

$$y - 210 = 70(x - 2)$$

$$5. \quad y - 24 = \frac{1}{9}(x - 32)$$

point  
slope  
form

1.  $x + 4y = 8$   
 $4y = -x + 8$   
 $y = -\frac{1}{4}x + 2$

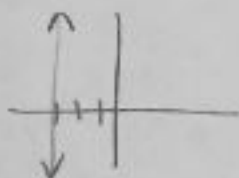


Standard  
Form

2.  $y - 5 = -2(x + 1)$



3.  $x + 3 = 0$   
 $x = -3$



4.  $4x - 3y = 12$   
 $-3y = -4x + 12$   
 $y = \frac{4}{3}x - 4$



5.  $y = -1$



6.  $y + 1 = -(x + 2)$



7.  $12w + 4r = 20$

8.  $3j + 2c = 25$