

# Review - Mid - Chapter 5 Quiz

① (3,4), (5,8)  
 $m = \frac{8-4}{5-3} = \frac{4}{2} = 2$

Point-Slope  
 $y-4 = 2(x-3)$   
 or  $y-8 = 2(x-5)$

DAMS  
 $y-8 = 2x-10$   
 $+8 \quad +8$

Slope-Intercept  
 $y = 2x - 2$

② (4,5), (0,3)  $b=3$   
 $m = \frac{3-5}{0-4} = \frac{-2}{-4} = \frac{1}{2}$

Point-Slope  
 $y-5 = \frac{1}{2}(x-4)$   
 or  $y-3 = \frac{1}{2}x$

Slope-Intercept  
 $y = \frac{1}{2}x + 3$

③ (1,4), (-1,1)  
 $m = \frac{1-4}{-1-1} = \frac{-3}{-2} = \frac{3}{2}$

Point-Slope  
 $y-4 = \frac{3}{2}(x-1)$   
 or  $y-1 = \frac{3}{2}(x+1)$

DAMS  
 $y-1 = \frac{3}{2}x + \frac{3}{2}$   
 $+1 \quad +1$

Slope-Intercept  
 $y = \frac{3}{2}x + \frac{5}{2}$

④ (2,4), (-3,-6)  
 $m = \frac{-6-4}{-3-2} = \frac{-10}{-5} = 2$

Point-Slope  
 $y-4 = 2(x-2)$   
 or  $y+6 = 2(x+3)$

DAMS  
 $y+6 = 2x+6$   
 $-6 \quad -6$   
 Slope-Intercept  
 $y = 2x$

⑤ (-2,2), (-2,10)  
 $m = \frac{10-2}{-2-(-2)} = \frac{8}{0}$  undefined

$x = -2$  Point-Slope and Slope-Intercept

⑥ (4,-1), (-8,7)  
 $m = \frac{7-(-1)}{-8-4} = \frac{8}{-12} = -\frac{2}{3}$

Point-Slope  
 $y+1 = -\frac{2}{3}(x-4)$   
 or  $y-7 = -\frac{2}{3}(x+8)$

DAMS  
 $y-7 = -\frac{2}{3}x - \frac{16}{3}$   
 $+7 \quad +7$   
 $A_7 \quad -\frac{16}{3} + \frac{21}{3} = \frac{5}{3}$

Slope-Intercept  
 $y = -\frac{2}{3}x + \frac{5}{3}$

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

Point-Slope  
 $y+3 = -\frac{1}{2}(x+2)$   
 or  $y+5 = -\frac{1}{2}(x-2)$

DAMS  
 $y+5 = -\frac{1}{2}x + 1$   
 $-5 \quad -5 \quad 5$

Slope-Intercept  
 $y = -\frac{1}{2}x - 4$

⑧ (-3,8), (-3,10)  
 $m = \frac{10-8}{-3-(-3)} = \frac{2}{0}$  undefined

$x = -3$  Point-Slope and Slope-Intercept

⑨  $(3, 0.5), (10, -0.2)$   
 $m = \frac{-0.2 - 0.5}{10 - 3} = \frac{-0.7}{7} = -\frac{1}{10}$

Point-Slope  $y - 0.5 = -\frac{1}{10}(x - 3)$   
 or  $y + 0.2 = -\frac{1}{10}(x - 10)$   
 DPMS  $y + 0.2 = -\frac{1}{10}x + 1$   
 $S_{0.2} \quad -0.2 \quad = 0.2$   
 Slope-Intercept  $y = -\frac{1}{10}x + 0.8$

⑩  $(-6, 5), (1, 0)$   
 $m = \frac{0 - 5}{1 - (-6)} = \frac{-5}{7}$

Point-Slope  $y - 5 = -\frac{5}{7}(x + 6)$   
 or  $y = -\frac{5}{7}(x - 1)$   
 DPMS  $y = -\frac{5}{7}x + \frac{5}{7}$   
 Slope-Intercept

⑪  $(3, -4), m = 6$   
 Point-Slope  $y + 4 = 6(x - 3)$   
 DPMS  $y + 4 = 6x - 18$   
 $S_4 \quad -4 \quad -4$   
 Slope-Intercept  $y = 6x - 22$

⑫  $(4, 0), m = -1$   
 Point-Slope  $y = -1(x - 4)$   
 DPMS  $y = -x + 4$   
 Slope-Intercept

⑬  $(5, 3), m = \text{undefined}$   
 Point-Slope and Slope-Intercept  $x = 5$

⑭  $(5, 3), m = 0$   
 Point-Slope  $y - 3 = 0$   
 Slope-Intercept  $y = 3$

⑮  $y + 3 = -\frac{1}{2}(x - 10)$   
 $m = -\frac{1}{2}, (10, -3)$

⑯  $y - 3 = 3(x - \frac{1}{3})$   
 $m = 3, (\frac{1}{3}, 3)$

⑰  $y + 12 = 5(x + 4)$   
 $m = 5, (-4, -12)$

⑱  $y = 4x - 2$   
 $m = 4, b = -2$

⑲  $y = \frac{4}{5}x + 7$   
 $m = \frac{4}{5}, b = 7$

⑳  $y = 2x - \frac{9}{2}$   
 $m = 2, b = -\frac{9}{2}$

㉑  $b = 3, m = -\frac{1}{2}$   
 $y = -\frac{1}{2}x + 3$

㉒  $(-3, -1), (1, 2)$   
 $m = \frac{3}{4}, (1, 2)$   
 $y - 2 = \frac{3}{4}(x - 1)$   
 $y - 2 = \frac{3}{4}x - \frac{3}{4}$  DPMS  
 $+2 \quad +2 \quad A_2$

$y = \frac{3}{4}x + 1\frac{1}{4}$   
 or  $y = \frac{3}{4}x + \frac{5}{4}$

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23)  $(-3, 4), (1, 1)$

$m = -\frac{3}{4} (1, 1)$

$y - 1 = -\frac{3}{4}(x - 1)$

DPMS

$y - 1 = -\frac{3}{4}x + \frac{3}{4}$

A<sub>1</sub>

$+7 \quad +1$

$y = -\frac{3}{4}x + 1\frac{3}{4}$

or  $y = -\frac{3}{4}x + \frac{7}{4}$

24)  $(-2, -1), (1, 3)$

$m = \frac{4}{3} (1, 3)$

$y - 3 = \frac{4}{3}(x - 1)$

DPMS

$y - 3 = \frac{4}{3}x - \frac{4}{3}$

A<sub>3</sub>

$+3 \quad +3$

$y = \frac{4}{3}x + \frac{5}{3}$

or  $y = \frac{4}{3}x + 1\frac{2}{3}$

25)  $(2, 2)$  and  $(5, y), m=2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{2}{1} = \frac{y - 2}{5 - 2}$

~~$2 = y - 2$~~

~~$+3$~~

$y - 2 = 6$

$+2 \quad +2$

$y = 8$

A<sub>2</sub>

26)  $(9, 4)$  and  $(x, 6), m = -\frac{1}{3}$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$-\frac{1}{3} = \frac{6 - 4}{x - 9}$

~~$-\frac{1}{3} = \frac{2}{x - 9}$~~

$-1(x - 9) = 6$

$-x + 9 = 6$

DPMS

$-9 \quad -9$

S<sub>9</sub>

$-x = -3$

$-1 \quad -1$

D-1

$x = 3$

27)  $(-12, 9)$  and  $(x, -2), m = -\frac{1}{2}$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$-\frac{1}{2} = \frac{-2 - 9}{x - (-12)}$

~~$-\frac{1}{2} = \frac{-11}{x + 12}$~~

$-1(x + 12) = -22$

$-x - 12 = -22$  DPMA

$+12 \quad +12$  A<sub>12</sub>

$-x = -10$

$-1 \quad -1$  D-1

$x = 10$

$$(28) \quad y = kx$$

$$\frac{30.4}{9.5} = \frac{k(9.5)}{9.5}$$

$$3.2 = k$$

equation  $\rightsquigarrow$

$$y = 3.2x$$

$$\frac{22}{3.2} = \frac{3.2x}{3.2}$$

$$6.875 = x$$

(29)

$$\frac{250\text{ft}}{60\text{mph}} = \frac{x}{96\text{mph}}$$

$$\frac{250(96)}{60} = 400\text{ft}$$

solns.  
for last 2