

PTS

Daily Homework Quiz

Chapter 5 Review

5PTS

1. Write an equation of the line with a slope of -4 and a y-intercept of 1.

S/I: $Y = -4X + 1$

2. Write a slope-intercept equation of the line that passes through the given points. $(-9, 1), (0, -8)$

GOOD OBSERVATION
y-int

5PTS
STEP 1: $M = \frac{\Delta Y}{\Delta X} = \frac{1+8}{-9-0}$ OR $\frac{-8-1}{0+9} = M = -1$

$y = -x - 8$

STEP 2: Pick a point $(0, -8)$

Pick $(-9, 1)$

5PTS P/S $y + 8 = -1(x - 0)$

$y - 1 = -1(x + 9)$

$y + 8 = -x$
 $y = -x - 8$

$y - 1 = -x - 9$
 $y = -x - 8$

3. An electronics game store sells used games for \$12.99 with a \$20 membership fee. Write an equation that gives the total cost to become a member and buy games as a function of the number of games that are purchased. Then find the cost for 6 games.

KI: USED GAMES - \$12.99/GAME
MEMBERSHIP FEE - \$20
COST OF 6 GAMES

DEFINE VARIABLE: $x = \#$ of GAMES BOUGHT

WRITE AN EQUATION: $f(x) = 20 + 12.99x$ 5PTS

$y = \text{Total cost } \$$

SOLVE: $f(6) = 20 + 12.99(6) = 97.94$

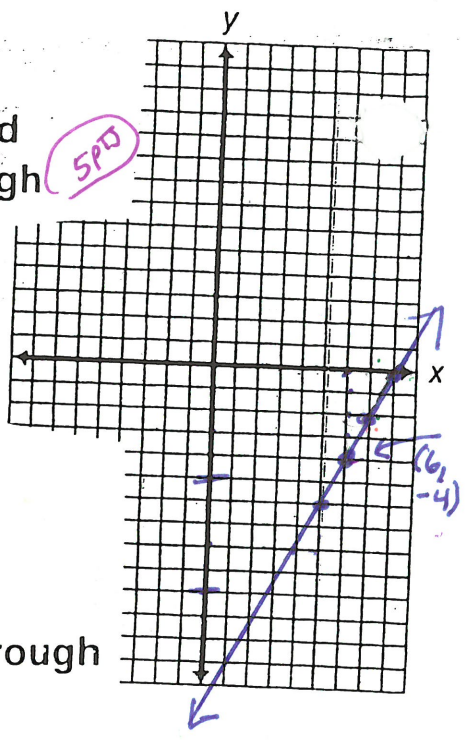
ANSWERS IN WORDS:

IT will cost \$97.94 for 6 used games 5PTS

OVER →

Daily Homework Quiz

4. Write an equation in BOTH slope/intercept and point-slope form of the line that passes through (6, -4) and has slope 2. Then Graph.



SPTS
 P/S $\rightarrow y + 4 = 2(x - 6)$
 $y + 4 = 2x - 12$
 $y = 2x - 16$

SPTS
S/I: $y = 2x - 16$

5. Write 4 equations of the line that passes through (-1, -6) and (3, 10).

20PTS
 $M = \Delta y / \Delta x = \frac{-6 - 10}{-1 - 3} = \frac{-16}{-4} = 4$ $M = 4$

① P/S: $y + 6 = 4(x + 1)$

② P/S: $y - 10 = 4(x - 3)$

③ S/I $y - 10 = 4x - 12$
 $y = 4x - 2$

④ STANDARD FORM:
 $-4x + y = -2$

7. Write the slope-intercept equation of the line that passes through the point (-1, 4) and is parallel to the line $y = 5x - 2$.

// $m = 5$ ← *SPTS*
 // EQUATION: P/S $y - 4 = 5(x + 1)$ ← *SPTS*
 $y - 4 = 5x + 5$
 $y = 5x + 9$ ← *SPTS*
S/I: $y = 5x + 9$

8. Write the slope-intercept equation of the line that passes through the point (-1, -1) and is perpendicular to the line $y = -1/4x + 2$.

$\perp m = 4$ ← *SPTS*
⊥ EQUATION: P/S $y + 1 = 4(x + 1)$ ← *SPTS*
 $y + 1 = 4x + 4$
 $y = 4x + 3$ ← *SPTS*
S/I: $y = 4x + 3$

Chapter 5 More Practice

Date _____ Period _____

Write the **SLOPE-INTERCEPT** form of the equation of the line described.

1) through: (2, 5), perp. to $y = -\frac{1}{5}x - 5$
 $\perp m = 5$

$y = 5x - 5$

P/s $y - 5 = 5(x - 2)$

$y - 5 = 5x - 10$
 $+5 \quad +5$

S/I $y = 5x - 5$

2) through: (3, 3), perp. to $y = -\frac{3}{5}x + 4$
 $\perp m = 5/3$

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

P/s $y - 3 = \frac{5}{3}(x - 3)$

$y - 3 = \frac{5}{3}x - 5$
 $+3 \quad +3$

S/I $y = \frac{5}{3}x - 2$

Write the **POINT-SLOPE** form of the equation of the line described.

- 1) Parallel lines have the same slopes.
- 2) Perpendicular lines have the negative reciprocal slopes.

3) through: (5, -5), parallel to $y = -\frac{8}{5}x + 5$
 $\parallel m = -\frac{8}{5}$

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

4) through: (2, 3), parallel to $y = \frac{1}{2}x + 4$
 $\parallel m = 1/2$

$y - 3 = \frac{1}{2}(x - 2)$

5) through: (4, 3), perp. to $y = -\frac{4}{5}x - 2$
 $\perp m = \frac{5}{4}$

$y - 3 = \frac{5}{4}(x - 4)$

6) through: (-5, 4), perp. to $y = \frac{1}{3}x - 2$
 $\perp m = -3$

$y - 4 = -3(x + 5)$

Memorize

① SLOPE INTERCEPT $y = mx + b$

② POINT SLOPE $y - y_1 = m(x - x_1)$

③ STANDARD FORM $Ax + By = C$

A, B, C are integers

Write the **SLOPE-INTERCEPT** form of the equation of the line described.

7) through: $(-1, -3)$, parallel to $y = 5x - 4$

$$y = 5x + 2$$

$$//m = 5$$

P/S $y + 3 = 5(x + 1)$

$$y + 3 = 5x + 5$$

$$\begin{array}{r} -3 \\ -3 \end{array}$$

S/I $y = 5x + 2$

8) through: $(3, 5)$, parallel to $y = \frac{2}{3}x + 2$

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

$$//m = 2/3$$

P/S $y - 5 = \frac{2}{3}(x - 3)$

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

$$\begin{array}{r} +5 \\ +5 \end{array}$$

S/I $y = \frac{2}{3}x + 3$

Write the **slope-intercept** form of the equation of the line through the given point with the given slope.

9) through: $(-4, 1)$, slope = -2

$$y = -2x - 7$$

P/S $y - 1 = -2(x + 4)$

$$y - 1 = -2x - 8$$

$$\begin{array}{r} +1 \\ +1 \end{array}$$

S/I $y = -2x - 7$

10) through: $(-1, 5)$, slope = -3

$$y = -3x + 2$$

P/S $y - 5 = -3(x + 1)$

$$y - 5 = -3x - 3$$

$$\begin{array}{r} +5 \\ +5 \end{array}$$

S/I $y = -3x + 2$

Write the **slope-intercept** form of the equation of the line through the given points.

11) through: $(-4, 4)$ and $(-2, 1)$

$$m = \frac{\Delta y}{\Delta x} = \frac{4 - 1}{-2 - (-4)} = \frac{3}{-2}$$

$$m = -3/2$$

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

P/S $y - 4 = -\frac{3}{2}(x + 4)$

$$y - 4 = -\frac{3}{2}x - 6$$

$$\begin{array}{r} +4 \\ +4 \end{array}$$

S/I $y = -\frac{3}{2}x - 2$