Algebra 1 Name KEY ID: 1

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 $y - 5 = 5(x - 2)$

$y - 5 = 5x - 10$

$+5 \quad +5$

$\perp$ S/I $\boxed{y = 5x - 5}$

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

$\perp m = 5/3$

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

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

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

$+3 \quad +3$

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

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

$// m = \frac{-8}{5}$

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

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

$// m = 1/2$

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

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

$\perp m = \frac{5}{4}$

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

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

$\perp m = -3$

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

Memorize

1. SLOPE INTERCEPT $y = mx + b$
2. POINT SLOPE $y - y_1 = m(x - x_1)$
3. STANDARD FORM $Ax + By = C$

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 $y + 3 = 5(x + 1)$

$y + 3 = 5x + 5$

$-3 \quad -3$

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

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

$+5 \quad +5$

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 $y - 1 = -2(x + 4)$

$y - 1 = -2x - 8$

$+1 \quad +1$

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

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

$y = -3x + 2$

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

$y - 5 = -3x - 3$

$+5 \quad +5$

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 $(-2, 1)$

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

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

$m = -3/2$

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

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

$+4 \quad +4$

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