

Unit 4. Day 16 homework

1. Write an equation in point-slope, slope-intercept and standard form for a line that is parallel to the line $y = 5x + 4$ and passes through the point $(-1, 2)$. $m = 5$

Point-Slope Form $y - y_1 = m(x - x_1)$	Slope-Intercept Form $y = mx + b$	Standard Form $Ax + By = C$
$y - 2 = 5(x + 1)$	$y - 2 = 5x + 5$ $y = 5x + 7$	$-5x + y = 7$

2. Write an equation in point-slope, slope-intercept and standard form for a line that is perpendicular to the line $y = -\frac{1}{2}x + 3$ and passes through the point $(8, -1)$. $m = 2$

Point-Slope Form $y - y_1 = m(x - x_1)$	Slope-Intercept Form $y = mx + b$	Standard Form $Ax + By = C$
$y + 1 = 2(x - 8)$	$y + 1 = 2x - 16$ $y = 2x - 17$	$-2x + y = -17$

3. Are the following lines, parallel, perpendicular, or neither?

$-2x + y = 4$

$y = 2x + 4$
 $m = 2$

Opposite Reciprocal

$x + 2y = 4$

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

$m = -\frac{1}{2}$

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