Algebra 1
Practice 4.2-4.4
Whiteboards

$y = mx + B$

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

parallel m = same //

perpendicular m = opp + recip $\perp$

$y = mx + B$

Write an equation in slope-intercept form for the line that passes through (−2, 4) and is parallel to the graph of $y = 6x - 3$.

$m = 6$ $(-2, 4)$
x y

$4 = 6 \cdot -2 + B$

$4 = -12 + B$

$+12$ $+12$

$16 = B$

$y = 6x + 16$

$y = mx + B$ //

~~pt slope~~

39. $(2, 5), y = x - 3$

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Write an equation in slope-intercept form for the line that passes through the given point and is perpendicular to the graph of the given equation.

43. $(2, 4)$, $y = 3x$

$m = -\frac{1}{3}$

$4 = -\frac{1}{3} \cdot \frac{2}{1} + B$

$4 = -\frac{2}{3} + B$

$+\frac{2}{3} \quad +\frac{2}{3}$

$4\frac{2}{3} = B$

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

$\frac{14}{3}$

$y = mx + B$ $\perp$ perpendicular

44. $(1, 3), y = -2x - 4$

1 $y = -3x + 5$ $(4, 8)$

Slope-intercept form
→ Point-slope form
Standard form ✱ $Ax + By = C$
Remember: you are the expert for your problem!

$y - 8 = \frac{1}{3}(x - 4)$

$3 \cdot y - 8 = 3 \cdot \frac{1}{3}x - 3 \cdot \frac{4}{3}$

$3y - 24 = x - 4$
$-x \quad +24 \quad -x \quad +24$

$-x + 3y = 20$
$\frac{-x}{-1} + \frac{3y}{-1} = \frac{20}{-1}$

$\frac{3}{1} \cdot \frac{1}{3} = \frac{3}{3}$

$x - 3y = -20$

ICe WS odds due Tues.