

Example 2: Use the given conditions to write an equation for the line in point-slope form and in slope-intercept form.

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a. Passing through $(3, -4)$ and perpendicular to the line whose equation is $y = \frac{1}{2}x + 4$

b. Passing through $(-3, 2)$ and parallel to the line whose equation is $3x - 8y - 7 = 0$

c. Passing through $(1, -1)$ and perpendicular to the line whose equation is $x - 4y - 5 = 0$