Graphing Linear Equations: Multiple-Choice Strategy

Worked example / complete source key

A line passes through (0, 3) and (2, 7). Which equation matches? A) y = 2x + 3 B) y = 3x + 2 C) y = -2x + 3 D) y = 0.5x + 3

Answer: A) y = 2x + 3

Reason: The y-intercept is 3 because the line crosses at (0, 3). Slope = (7 - 3)/(2 - 0) = 4/2 = 2. So y = 2x + 3. Option B has intercept 2, wrong. Option C has negative slope, wrong. Option D has slope 0.5, wrong.

Check: Substitute (2, 7): 2(2) + 3 = 7, correct. Substitute (0, 3): 3 = 3, correct.