

Watch. Practice. Understand. | Lesson 003

2022 The Secret of Algebra I Chapter 3 Graphing Linear Functions

Watch the matching video: <https://www.youtube.com/watch?v=QqzCuWeTc3k>

Practice focus: Lines and slopes

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 Find the slope through (2, 5) and (6, 13).

02 Write the line with slope -3 through (2, 7).

03 Find the line perpendicular to $y = 2x + 1$ through (4, 3).

04 Find both intercepts of $3x + 2y = 12$.

Worked answers | Lesson 003

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Practice focus: Lines and slopes

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01 Find the slope through (2, 5) and (6, 13).

$$m = (13 - 5)/(6 - 2) = 8/4 = 2.$$

02 Write the line with slope -3 through (2, 7).

$$y - 7 = -3(x - 2), \text{ or } y = -3x + 13.$$

03 Find the line perpendicular to $y = 2x + 1$ through (4, 3).

$$\text{Perpendicular slope is } -1/2. \ y - 3 = -(x - 4)/2, \text{ so } y = -x/2 + 5.$$

04 Find both intercepts of $3x + 2y = 12$.

$$\text{Set } y = 0: x = 4. \text{ Set } x = 0: y = 6. \text{ Intercepts: } (4, 0) \text{ and } (0, 6).$$