Graphing Linear Functions Worksheet: Slope-Intercept Practice

Original tasks 1, 2, 3, 4 / complete keys

Task 1

Graph y = 2x + 1 on a grid with one-unit squares. State the intercept, the second point, and verify.

Answer: Intercept (0, 1); second point (1, 3); verification: 3 = 2(1) + 1.

Reason: b = 1 gives the intercept. m = 2 = 2/1, so from (0, 1) move 1 right and 2 up to (1, 3). Substitution confirms the point.

Check: Substitute (1, 3): 2(1) + 1 = 3, which matches the y-coordinate.

Task 2

Graph y = -1/2 x + 4 on a grid with one-unit squares. State the intercept, the second point, and verify.

Answer: Intercept (0, 4); second point (2, 3); verification: 3 = -1/2(2) + 4.

Reason: b = 4 gives the intercept. m = -1/2 means rise -1, run 2, so from (0, 4) move 2 right and 1 down to (2, 3).

Check: Substitute (2, 3): -1/2(2) + 4 = -1 + 4 = 3, which matches.

Task 3

Graph y = 3/4 x - 2 on a grid with one-unit squares. State the intercept, the second point, and verify.

Answer: Intercept (0, -2); second point (4, 1); verification: 1 = 3/4(4) - 2.

Reason: b = -2 gives the intercept. m = 3/4 means rise 3, run 4, so from (0, -2) move 4 right and 3 up to (4, 1).

Check: Substitute (4, 1): 3/4(4) - 2 = 3 - 2 = 1, which matches.

Task 4

Graph y = -3x + 5 on a grid with one-unit squares. State the intercept, the second point, and verify.

Answer: Intercept (0, 5); second point (1, 2); verification: 2 = -3(1) + 5.

Reason: b = 5 gives the intercept. m = -3 = -3/1 means rise -3, run 1, so from (0, 5) move 1 right and 3 down to (1, 2).

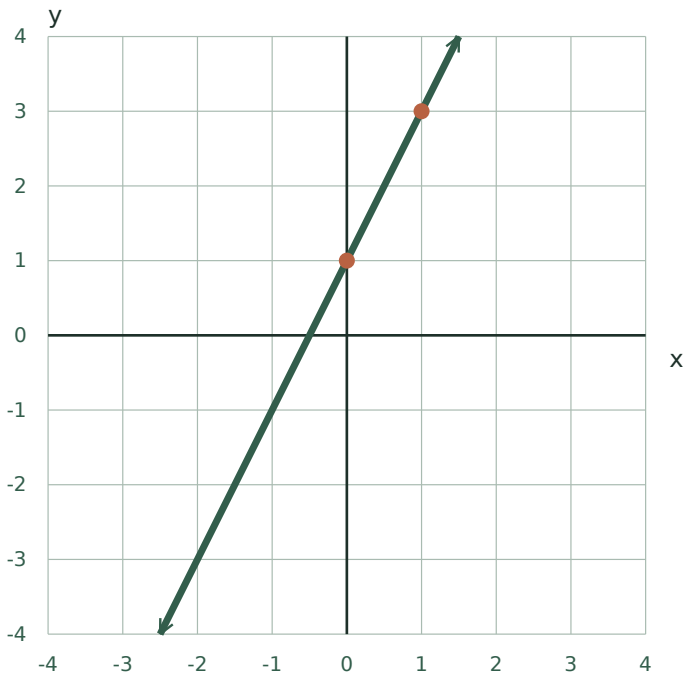
Check: Substitute (1, 2): -3(1) + 5 = 2, which matches.

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Task 1 / completed source graph

Graph y = 2x + 1 on a grid with one-unit squares. State the intercept, the second point, and verify.

Line 1 (solid green): y = 2x + 1



A complete line continues beyond this display window; arrowheads show continuation.

Marked point: (0, 1).
Marked point: (1, 3).

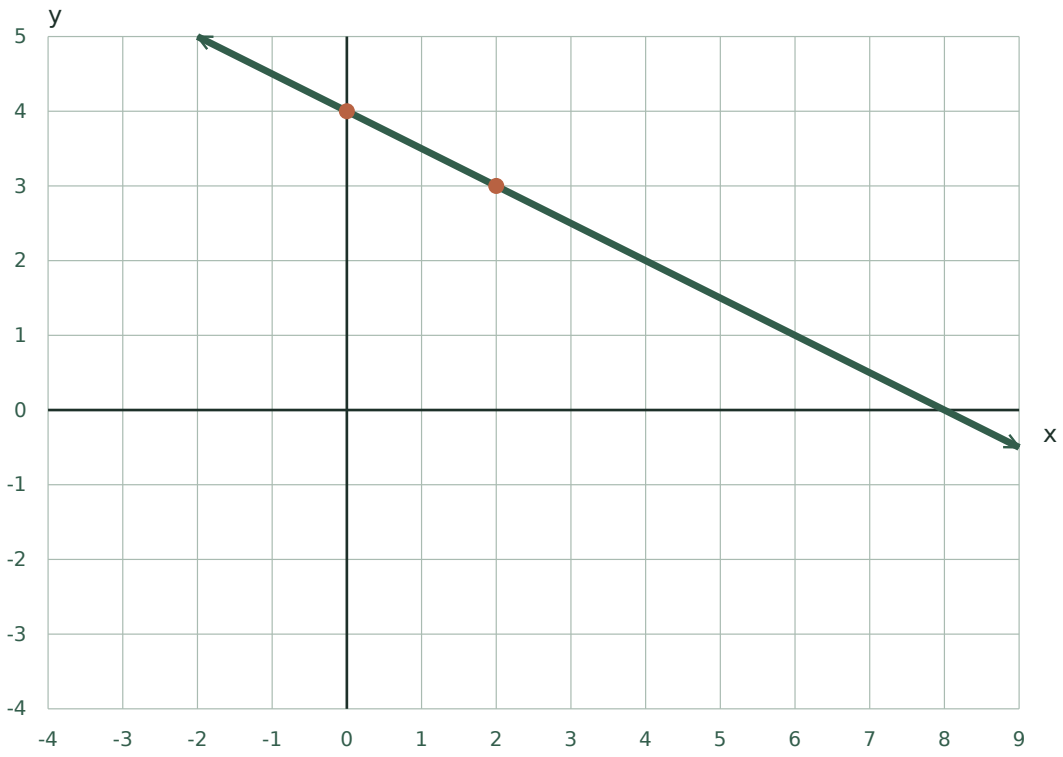
Horizontal interval = 1; vertical interval = 1. This is a display window, not a new domain.

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Task 2 / completed source graph

Graph y = -1/2 x + 4 on a grid with one-unit squares. State the intercept, the second point, and verify.

Line 1 (solid green): y = -1/2 x + 4



A complete line continues beyond this display window; arrowheads show continuation.

Marked point: (0, 4).
Marked point: (2, 3).

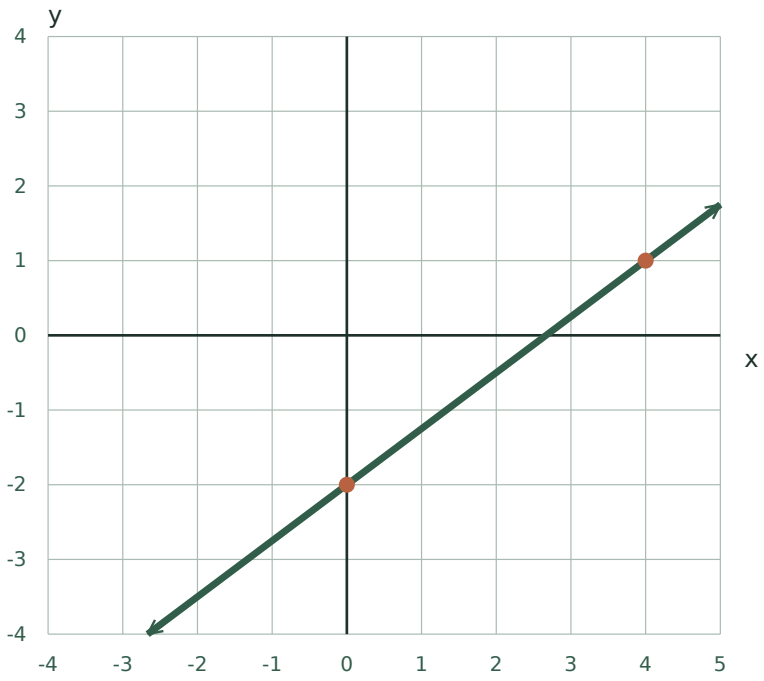
Horizontal interval = 1; vertical interval = 1. This is a display window, not a new domain.

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Task 3 / completed source graph

Graph y = 3/4 x - 2 on a grid with one-unit squares. State the intercept, the second point, and verify.

Line 1 (solid green): y = 3/4 x - 2



A complete line continues beyond this display window; arrowheads show continuation.

Marked point: (0, -2).
Marked point: (4, 1).

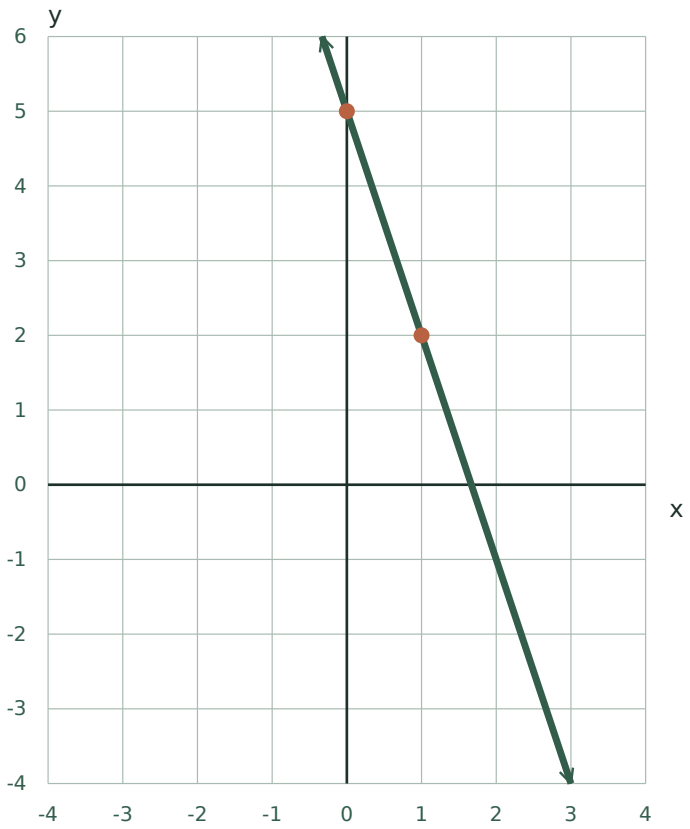
Horizontal interval = 1; vertical interval = 1. This is a display window, not a new domain.

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Task 4 / completed source graph

Graph y = -3x + 5 on a grid with one-unit squares. State the intercept, the second point, and verify.

Line 1 (solid green): y = -3x + 5



A complete line continues beyond this display window; arrowheads show continuation.

Marked point: (0, 5).
Marked point: (1, 2).

Horizontal interval = 1; vertical interval = 1. This is a display window, not a new domain.

Graphing Linear Functions Worksheet: Slope-Intercept Practice

Original rubric / reflection

- [ ] Y-intercept plotted correctly at (0, b).
- [ ] Slope interpreted as rise over run with correct sign.
- [ ] Second point plotted accurately and labeled.
- [ ] Straight line drawn through both points with a straightedge.
- [ ] Verification by substitution shown or stated.
- [ ] Line extended across the grid and labeled with its equation.

Reflection: What did you check, what did you change, and what will you try next?