Blank Slope Graph Paper: Coordinate Grid with Rise-Run Plotting Space

Rubric Key

Concise rubric key for grading the worksheet.

1. Side column states a clear sign convention for rise and run.

2. Y-intercept is recorded as an ordered pair in the marker space.

3. Rise and run values are recorded in separate labeled boxes.

4. At least three points are plotted using repeated rise and run steps.

5. Plotted line passes through the recorded y-intercept.

6. Slope check recomputes change in y over change in x and matches the record (2/3, negative 1/2, 2, 0 respectively).

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Complete worked example / separate answer key

A line has y-intercept (0, 2) and slope 3/2. Using the template convention, record rise and run, plot three points, and state the slope check.

Answer: Record intercept (0, 2), rise 3, run 2. Plot (0, 2), then move up 3 and right 2 to (2, 5), then repeat to (4, 8). The y-change from (0, 2) to (2, 5) is 3 and the x-change is 2, so slope is 3/2, matching the record.

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Original tasks 1, 2, 3 / complete keys

Task 1

A line has y-intercept (0, 1) and slope 2/3. Record rise and run, plot three points, and state the slope check.

Answer: Rise 2, run 3; points (0, 1), (3, 3), (6, 5); slope check gives 2/3.

Reason: Start at (0, 1). Move up 2 and right 3 to (3, 3), then repeat to (6, 5). The y-change from (0, 1) to (3, 3) is 2 and the x-change is 3, so slope is 2/3.

Check: Subtract coordinates of two plotted points: (3 minus 0) equals 3 for run and (3 minus 1) equals 2 for rise; divide 2 by 3 and compare with the recorded slope.

Task 2

A line has y-intercept (0, 4) and slope negative 1/2. Choose to place the negative sign on the rise, record the boxes, plot three points, and state the slope check.

Answer: Rise negative 1, run 2; points (0, 4), (2, 3), (4, 2); slope check gives negative 1/2.

Reason: Start at (0, 4). Move down 1 and right 2 to (2, 3), then repeat to (4, 2). The y-change from (0, 4) to (2, 3) is negative 1 and the x-change is 2, so slope is negative 1/2.

Check: Compute change in y as 3 minus 4 equals negative 1 and change in x as 2 minus 0 equals 2; divide to get negative 1/2 and compare with the side-column record.

Task 3

A line passes through (1, 2) and (4, 8). Record rise and run from these points, plot a third point using the same steps, and state the slope check.

Answer: Rise 6, run 3, slope 2; third point (7, 14); slope check gives 2.

Reason: From (1, 2) to (4, 8), the y-change is 6 and the x-change is 3, so slope is 6/3 equals 2. Repeating rise 6 and run 3 from (4, 8) gives (7, 14).

Check: Subtract coordinates: 8 minus 2 equals 6 for rise and 4 minus 1 equals 3 for run; divide 6 by 3 to get 2 and compare with the recorded slope.

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Original tasks 4 / complete keys

Task 4

A line has y-intercept (0, 3) and slope 0. Record rise and run, plot three points, and state the slope check.

Answer: Rise 0, run 1; points (0, 3), (1, 3), (2, 3); slope check gives 0.

Reason: A slope of 0 means no vertical change. Start at (0, 3), move up 0 and right 1 to (1, 3), then repeat to (2, 3). The line is horizontal.

Check: Compute change in y as 3 minus 3 equals 0 and change in x as 1 minus 0 equals 1; divide 0 by 1 to get 0 and compare with the recorded slope.

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Worked example, Task 1, Task 2, Task 3, Task 4 / Answer Notes: Sign Placement and Check Method

Notes accompany the answer sheet.

A negative slope may be represented by a negative rise with a positive run, or a positive rise with a negative run; record which choice was made.

Slope check: subtract y-values of two plotted points for the rise, subtract x-values for the run, divide rise by run, and compare with the side-column record.

Verify the plotted line crosses the y-axis at the recorded intercept.

Accept any legible side-column entry that states rise, run, and intercept unambiguously.

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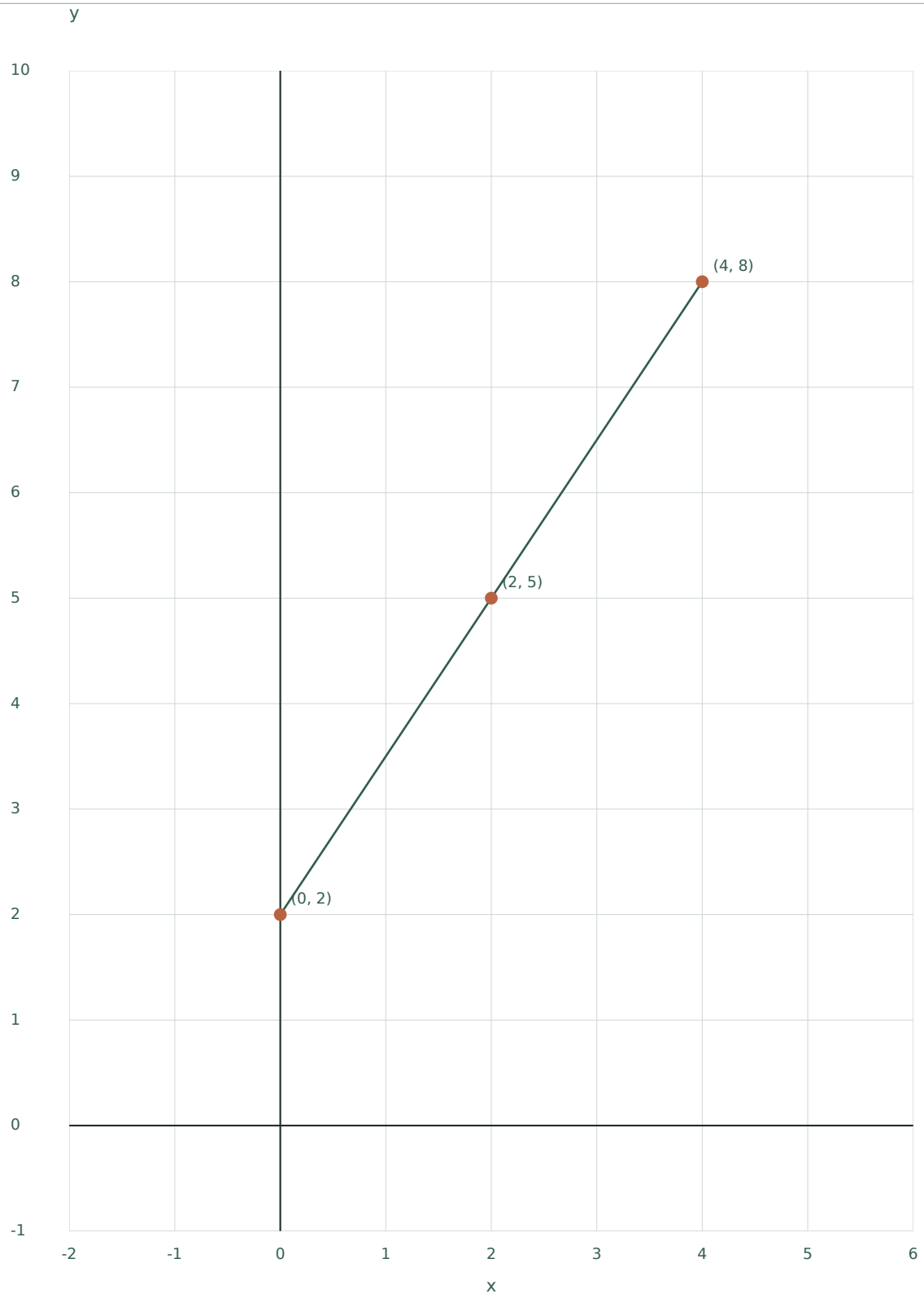
Task 1, Task 2, Task 3, Task 4 / Separate Answer Sheet: Rise, Run, Intercept, Points, Slope Check

Answer sheet; valid alternative sign placement on rise or run is accepted if plotted direction matches.

Prompt	Rise	Run	Y-intercept / given points / third point / slope check
1	2	3	(0, 1); (3, 3); (6, 5); slope check 2/3
2	negative 1	2	(0, 4); (2, 3); (4, 2); slope check negative 1/2
3	6	3	(1, 2) and (4, 8); third point (7, 14); slope 2
4	0	1	(0, 3); (1, 3); (2, 3); slope check 0

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Worked example / Worked Example: y-intercept (0, 2), slope 3/2



Record intercept (0, 2), rise 3, run 2; plot (0, 2), (2, 5), (4, 8); slope check 3/2.

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Source rubric / reflection

- [ ] Side column states a clear sign convention for rise and run.
- [ ] Y-intercept is recorded as an ordered pair in the marker space.
- [ ] Rise and run values are recorded in separate labeled boxes.
- [ ] At least three points are plotted using repeated rise and run steps.
- [ ] Plotted line passes through the recorded y-intercept.
- [ ] Slope check recomputes change in y over change in x and matches the record.
- [ ] Any valid sign placement on rise or run is accepted if the plotted direction matches.

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