Slope Drills: Rise Over Run Practice

Complete worked example / separate answer key

Find the slope of the line through (2, 1) and (6, 9).

Answer: Slope = 2. Rise = 9 - 1 = 8; run = 6 - 2 = 4; 8/4 = 2.

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

Task 1

A line passes through (1, 3) and (5, 11). Compute the slope using rise over run.

Answer: Slope = 2.

Reason: Rise = 11 - 3 = 8; run = 5 - 1 = 4; 8/4 simplifies to 2.

Check: From (1, 3), move up 2 and right 1 to (2, 5); repeat to (5, 11), confirming the slope.

Task 2

A line passes through (0, 7) and (4, 1). Compute the slope.

Answer: Slope = -3/2.

Reason: Rise = 1 - 7 = -6; run = 4 - 0 = 4; -6/4 simplifies to -3/2.

Check: From (0, 7), move down 3 and right 2 to (2, 4); then to (4, 1), confirming the negative slope.

Task 3

A line passes through (2, 5) and (2, 9). Compute the slope.

Answer: Undefined.

Reason: Rise = 9 - 5 = 4; run = 2 - 2 = 0; division by zero is undefined, so the line is vertical.

Check: Both points have x = 2, so the line is vertical; slope is undefined.

Task 4

A line passes through (3, 4) and (7, 4). Compute the slope.

Answer: Slope = 0.

Reason: Rise = 4 - 4 = 0; run = 7 - 3 = 4; 0/4 = 0, so the line is horizontal.

Check: Both points have y = 4, so the line is horizontal; slope is zero.

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Task 1, Task 2, Task 3, Task 4 / Answer Key: Slope Drills

Separate answer key with simplified slopes, rise and run values, and brief check notes for each item.

Item	Rise	Run	Slope (simplified)
1	8	4	2
2	-6	4	-3/2
3	4	0	Undefined
4	0	4	0

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Worked example, Task 1, Task 2, Task 3, Task 4 / Answer Key Check Notes

Brief check notes for each item.

Item 1: From (1,3), move up 2 and right 1 to (2,5); repeat to (5,11), confirming slope 2.

Item 2: From (0,7), move down 3 and right 2 to (2,4); then to (4,1), confirming slope -3/2.

Item 3: Both points have x=2, so the line is vertical; slope is undefined.

Item 4: Both points have y=4, so the line is horizontal; slope is zero.

Worked example: Rise = 9-1 = 8; run = 6-2 = 4; 8/4 = 2.

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Source rubric / reflection

- [ ] Correctly identifies rise and run from the graph or point pair.
- [ ] Uses consistent subtraction order for both coordinates.
- [ ] Simplifies the fraction fully.
- [ ] States the correct sign and type (positive, negative, zero, undefined).
- [ ] Shows labeled workspace with rise and run.
- [ ] Accepts valid alternative point choices that yield the same simplified slope.

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