

Algebra 1
Slope from Two Points

Slope from Two Points | A1-U05-P02
96 problems · Four activity formats

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Topic focus
Across 96 tasks this topic asks for an exact slope, coordinate, construction, comparison, or justified conclusion.
8 PDFs and a README; 46 buyer pages.

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Name: _____ Date: _____ Class: _____

Answer each question and record the matching bank letter. Give exact values. A value without its unit is not a complete answer.

Use the two coordinates $(-4, -3)$ and $(2, 3)$ to calculate m. Bank label: _____	Evaluate the difference ratio for $(0, -2)$ and $(6, 1)$. Bank label: _____
A report labels the slope through $(-4, 6)$, $(9, 6)$ undefined. Diagnose the confusion. Bank label: _____	Using the points in the listed order, find the slope from $(5, 2)$ to $(1, 10)$. Bank label: _____
Show with exact differences that reversing $(4, -1)$, $(-2, 8)$ does not change the slope. Bank label: _____	Compute the slope joining $(7, -3)$ to $(9, 3)$. Bank label: _____
A student uses $\frac{2-11}{15-3}$, then swaps the points. What ratio must the student use to keep the slope unchanged? Bank label: _____	Find the slope of the distinct points $(-6, 8)$, $(9, 8)$. Bank label: _____

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Begin at START. Answer the card, then find the matching final answer at the top of another card. Use the recording sheet for your reasoning. Visit each card once and continue to FINISH.

Incoming: $x = -19$. A point $(x, 2)$ has slope $\frac{5}{8}$ with $(1, -3)$. Determine x. Your response: _____	Incoming: $x = 9$. Identify all equal slope outcomes among pairs A, B, and C, where A and B have repeated x-coordinates. $A: (-2, 1), (-2, 9)$; $B: (6, -5), (6, 4)$; $C: (0, 0), (1, 8)$ Your response: _____
Incoming: One pair is $(0, -5)$ and $(2, 0)$. Find x in $(x, 11)$ when the slope to $(-1, -1)$ is $-\frac{2}{3}$. Your response: _____	Incoming: For $(-4, -7)$ and $(5, -5)$, the slope is $\frac{2}{9}$. Compute the slope from $(-9, 3)$ to $(-5, 14)$. Your response: _____
Incoming: $y = 8$. Which signed slope is greater: A through $(0, 0), (5, -4)$ or B through $(2, 7), (9, 1)$? Your response: _____	Incoming: $x = 2$. If $(5, -1)$ and $(9, y)$ have slope $-\frac{3}{4}$, find the missing output coordinate. Your response: _____

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Evaluate the supplied statement or method. Say whether it is correct, repair it if it is not, and verify the result exactly. Not every prompt contains an error.

For points $(1, 2)$ and $(5, 10)$, a student writes $\frac{10-2}{1-5} = -2$. Diagnose and repair the calculation.

A solution for $(-2, 1), (4, 10)$ computes run over rise and reports $\frac{2}{3}$. Correct it.

Pairs A and B start at $(0, 0)$ and end at $(4, 4)$ and $(4, -4)$. Compare their signed slopes and magnitudes.

A student calls the slope through $(3, -5), (3, 8)$ zero because the x -values match. What is the correct conclusion?

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Full Worked Solutions - excerpt

Worked example

Problem. Use the two coordinates $(-4, -3)$ and $(2, 3)$ to calculate m .

Answer. For $(-4, -3)$ and $(2, 3)$, the slope is 1.

Explanation and check.

Rise and run are both 6, hence $m = \frac{6}{6} = 1$.

Worked example

Problem. Evaluate the difference ratio for $(0, -2)$ and $(6, 1)$.

Answer. For $(0, -2)$ and $(6, 1)$, the slope is $\frac{1}{2}$.

Explanation and check.

The ratio of changes is $\frac{1-(-2)}{6-0} = \frac{3}{6} = \frac{1}{2}$.