

Algebra 1  
**Slope from Points, Tables & Graphs | Algebra 1 | 3-Topic Bundle**

3-topic bundle | 288 problems | Four activity formats

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**01    Slope from Two Points**

[View individual product and its full preview](#)

**02    Slope from Tables and Graphs**

[View individual product and its full preview](#)

**03    Positive, Negative, Zero, and Undefined Slope**

[View individual product and its full preview](#)

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**In every topic**

|                                             |          |
|---------------------------------------------|----------|
| Answer Bank Challenge                       | 24 tasks |
| Grid Rounds                                 | 24 tasks |
| Match & Move                                | 24 cards |
| Error Analysis & Strategy                   | 24 tasks |
| Quick Answer Key and Full Worked Solutions  | included |
| Teacher / Parent Use Guide and Terms of Use | included |

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**Product previews**

The following preview pages show the cover, all four activity formats, and worked examples for each included resource, in the listed order.

**24 PDFs and 3 READMEs; 225 buyer PDF pages across the 3 products.**

Preview pages are not included in the buyer page count. Check the list against resources you already own.

This is a fixed collection of the listed products. Purchase includes the existing individual resource files. To open a product's online preview, follow its title link and select View Preview.

Algebra 1  
Slope from Two Points

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

|    |                            |              |
|----|----------------------------|--------------|
| 01 | Answer Bank Challenge      | 24 tasks     |
| 02 | Grid Rounds                | 24 tasks     |
| 03 | Match & Move               | 24 cards     |
| 04 | Error Analysis & Strategy  | 24 tasks     |
| 05 | Quick Answer Key           | 96 answers   |
| 06 | Full Worked Solutions      | 96 solutions |
| 07 | Teacher / Parent Use Guide | included     |
| 08 | Terms of Use & License     | included     |

**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.**

## Algebra 1

Slope from  
Two Points

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.

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



## Algebra 1

Slope from  
Two Points

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

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.

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

## Algebra 1

**Slope from  
Two Points**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

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?

## Slope from Two Points

### 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  $m = \frac{6}{6} = 1$ .

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#### 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  $\frac{1-(-2)}{6-0} = \frac{3}{6} = \frac{1}{2}$ .

Algebra 1  
Slope from Tables and Graphs

Slope from Tables and Graphs | A1-U05-P03

96 problems · Four activity formats

|    |                            |              |
|----|----------------------------|--------------|
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| 08 | Terms of Use & License     | included     |

**Topic focus**  
Across 96 tasks this topic asks for an exact slope, missing datum, comparison, or justified linearity conclusion.  
**8 PDFs and a README; 87 buyer pages.**

## Algebra 1

## Slope from Tables and Graphs

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.

The graphs show the same square angle but use different horizontal units. Graph A: 4 squares right, 2 squares up; each horizontal square is 1x-units and each vertical square is 1y-units. Graph B: 4 squares right, 2 squares up; each horizontal square is 2x-units and each vertical square is 1y-units. Compare their signed coordinate slopes.

An interior output must share the common rate. The table  $x = -3, y = 2; x = 1, y = ?; x = 5, y = 10$  is declared linear. Determine the missing entry, or explain why no valid unique entry follows.

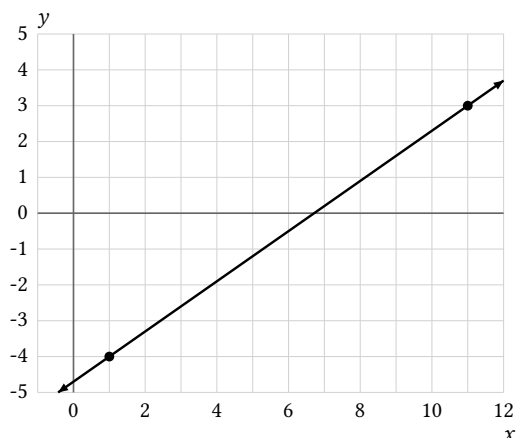
The table is declared linear.

| Input x | Output y |
|---------|----------|
| -3      | 2        |
| 1       | _____    |
| 5       | 10       |

Bank label: \_\_\_\_\_

Bank label: \_\_\_\_\_

An exact line graph marks the points  $x = 1, y = -4; x = 11, y = 3$ . Determine its slope.



An input cell must be recovered from its output. The table  $x = 2, y = 0; x = ?, y = 8; x = 8, y = 12$  is declared linear. Determine the missing entry, or explain why no valid unique entry follows.

The table is declared linear.

| Input x | Output y |
|---------|----------|
| 2       | 0        |
| _____   | 8        |
| 8       | 12       |

Bank label: \_\_\_\_\_

Bank label: \_\_\_\_\_

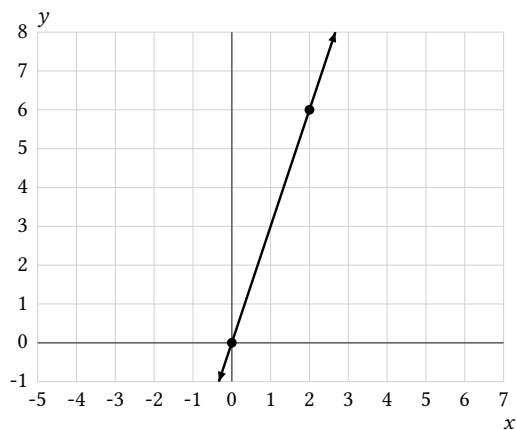
## Algebra 1

## Slope from Tables and Graphs

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

Answer each question and show your reasoning in the workspace. Give exact values rather than decimals unless the question supplies a decimal. A value without its unit is not a complete answer.

An exact line graph marks the points  $x = 0, y = 0$ ;  $x = 2, y = 6$ . Determine its slope.

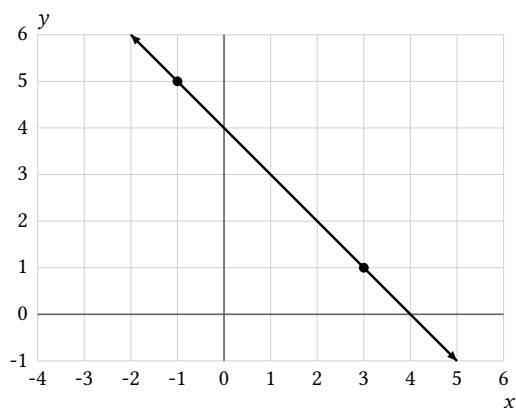


A middle output cell is blank. The table  $x = 0, y = 2$ ;  $x = 2, y = ?$ ;  $x = 4, y = 10$  is declared linear. Determine the missing entry, or explain why no valid unique entry follows.

The table is declared linear.

| Input $x$ | Output $y$ |
|-----------|------------|
| 0         | 2          |
| 2         | _____      |
| 4         | 10         |

On a coordinate graph, the line passes through  $x = -1, y = 5$ ;  $x = 3, y = 1$ . Read the rise and run from left to right and find  $m$ .



Does the table  $x = 0, y = 1$ ;  $x = 1, y = 3$ ;  $x = 2, y = 5$ ;  $x = 3, y = 7$  have a constant slope? Support the decision with interval rates.

| Input $x$ | Output $y$ |
|-----------|------------|
| 0         | 1          |
| 1         | 3          |
| 2         | 5          |
| 3         | 7          |

## Algebra 1

## Slope from Tables and Graphs

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

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:** The missing value in  $x = -\frac{5}{2}, y = -1$ ;  $x = ?, y = 2$ ;  $x = \frac{7}{2}, y = 5$  is  $x = \frac{1}{2}$ .

The output pattern uses noninteger values. The table  $x = 0, y = \frac{2}{3}$ ;  $x = 3, y = ?$ ;  $x = 9, y = \frac{20}{3}$  is declared linear. Determine the missing entry, or explain why no valid unique entry follows.

The table is declared linear.

| Input x | Output y       |
|---------|----------------|
| 0       | $\frac{2}{3}$  |
| 3       | _____          |
| 9       | $\frac{20}{3}$ |

Your response: \_\_\_\_\_

**Incoming:** On  $x = 0$  to  $x = 6$ , the requested slope is 1, but one global slope is not justified; adjacent average rates are 3, 0, -3.

A fractional input must be reconstructed exactly. The table  $x = -\frac{5}{2}, y = -1$ ;  $x = ?, y = 2$ ;  $x = \frac{7}{2}, y = 5$  is declared linear.

Determine the missing entry, or explain why no valid unique entry follows.

The table is declared linear.

| Input x        | Output y |
|----------------|----------|
| $-\frac{5}{2}$ | -1       |
| _____          | 2        |
| $\frac{7}{2}$  | 5        |

Your response: \_\_\_\_\_

**Incoming:** The missing value in  $x = 0, y = \frac{2}{3}$ ;  $x = 3, y = ?$ ;  $x = 9, y = \frac{20}{3}$  is  $y = \frac{8}{3}$ .

A visually flat segment competes with a steep scaled segment. Graph A: 8 squares right, 2 squares up; each horizontal square is  $3x$ -units and each vertical square is  $1y$ -units. Graph B: 2 squares right, 8 squares up; each horizontal square is  $1x$ -units and each vertical square is  $\frac{1}{4}y$ -units. Compare their signed coordinate slopes.

Your response: \_\_\_\_\_

**Incoming:** The slope is  $-\frac{3}{5}$ ; the coordinate rise is 6 and the coordinate run is -10.

This table is declared linear:  $x = 2, y = -8$ ;  $x = 8, y = -4$ ;  $x = 17, y = 2$ . Determine its common slope.

The table is declared linear.

| Input x | Output y |
|---------|----------|
| 2       | -8       |
| 8       | -4       |
| 17      | 2        |

Your response: \_\_\_\_\_

## Algebra 1

# Slope from Tables and Graphs

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

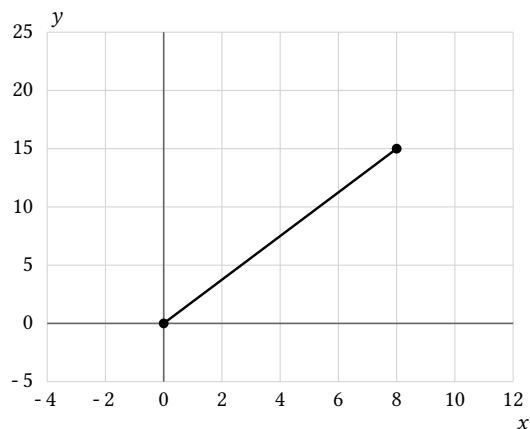
Evaluate the supplied statement or method. Say whether it is correct, repair it if it is not, and verify the result exactly. Not every prompt contains an error.

A student reads the table  $x = 0, y = 2$ ;  $x = 3, y = 8$  and calls the slope 6. Diagnose the answer.

slope is 6

| Input $x$ | Output $y$ |
|-----------|------------|
| 0         | 2          |
| 3         | 8          |

A graph moves 4 squares right and 3 up;  $x$ -squares represent 2 units and  $y$ -squares 5 units. A student reports  $\frac{3}{4}$ . Audit the scale use.



## Slope from Tables and Graphs

### Full Worked Solutions - excerpt

#### Worked example

**Problem.** The graphs show the same square angle but use different horizontal units. Graph A: 4 squares right, 2 squares up; each horizontal square is  $1x$ -units and each vertical square is  $1y$ -units. Graph B: 4 squares right, 2 squares up; each horizontal square is  $2x$ -units and each vertical square is  $1y$ -units. Compare their signed coordinate slopes.

**Answer.** Graph A has slope  $\frac{1}{2}$  and graph B has slope  $\frac{1}{4}$ ; A's signed slope is greater than B's.

#### Explanation and check.

The graphs show the same square angle but use different horizontal units. After applying both axis scales, compare  $\frac{1}{2}$  and  $\frac{1}{4}$ .

#### Worked example

**Problem.** An interior output must share the common rate. The table  $x = -3, y = 2$ ;  $x = 1, y = ?$ ;  $x = 5, y = 10$  is declared linear. Determine the missing entry, or explain why no valid unique entry follows.

The table is declared linear.

| Input x | Output y |
|---------|----------|
| -3      | 2        |
| 1       | _____    |
| 5       | 10       |

**Answer.** The missing value in  $x = -3, y = 2$ ;  $x = 1, y = ?$ ;  $x = 5, y = 10$  is  $y = 6$ .

#### Explanation and check.

An interior output must share the common rate. Known complete rows give slope 1, and propagating that rate yields 6.

Algebra 1  
Positive, Negative, Zero, and Undefined Slope

Positive, Negative, Zero, and Undefined Slope | A1-U05-P04

96 problems · Four activity formats

|    |                            |              |
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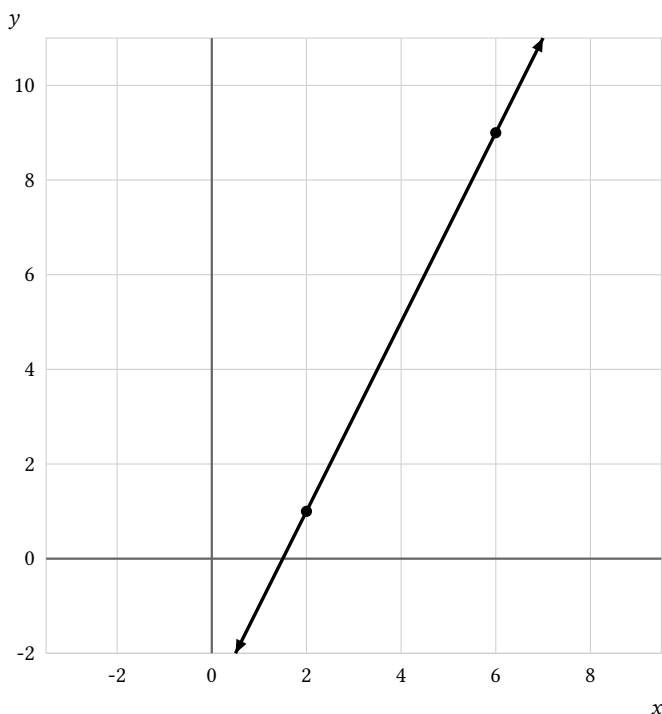
**Topic focus**  
Across 96 tasks this topic asks for positive, negative, zero, or undefined with a decisive reason.  
**8 PDFs and a README; 92 buyer pages.**

## Algebra 1

**Positive, Negative, Zero,  
and Undefined Slope**

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.

An exact line graph passes through  $(2, 1)$ ,  $(6, 9)$ . As  $x$  increases, classify its slope.

Bank label: \_\_\_\_\_

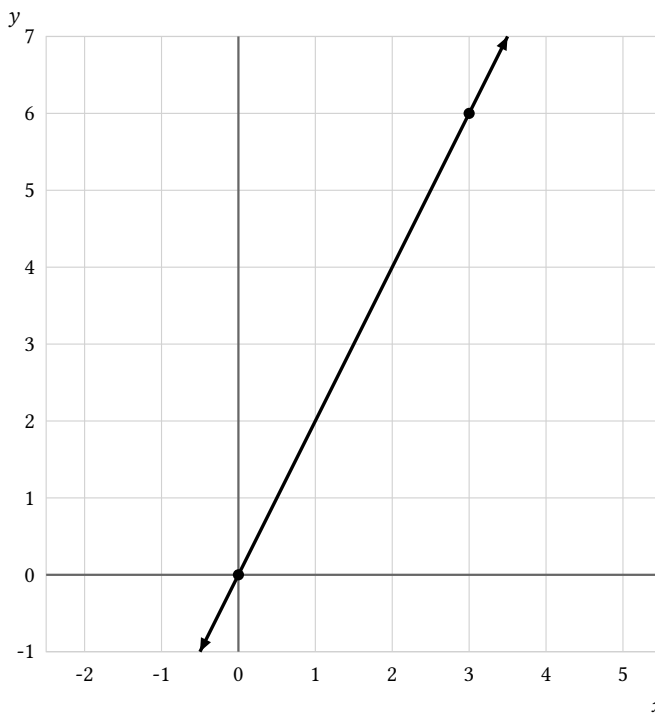
## Algebra 1

**Positive, Negative, Zero,  
and Undefined Slope**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

Answer each question and show your reasoning in the workspace. Give exact values rather than decimals unless the question supplies a decimal. A value without its unit is not a complete answer.

An exact line graph passes through  $(0, 0)$ ,  $(3, 6)$ . As  $x$  increases, classify its slope.





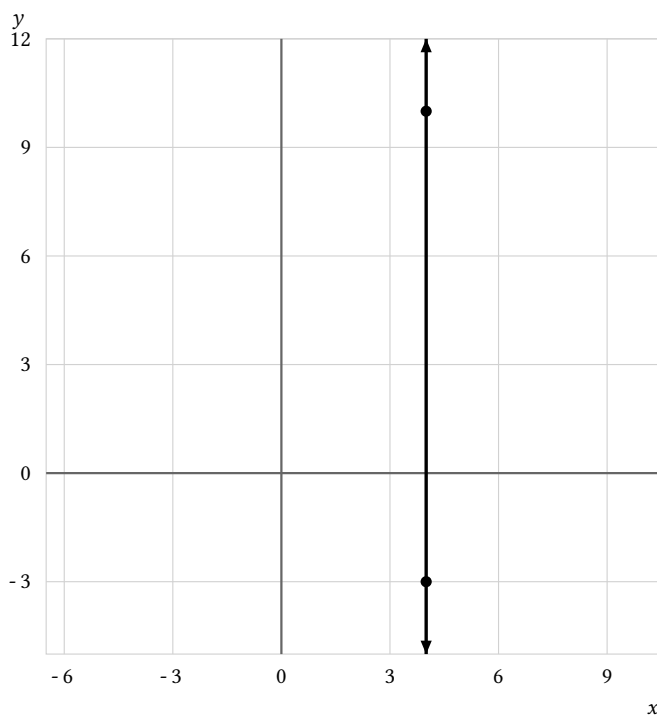
## Algebra 1

**Positive, Negative, Zero,  
and Undefined Slope**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

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.

Choose and justify a method before solving (compare coordinate changes, inspect orientation, or calculate rise over run). Then complete the task: A graph through  $(4, -3)$ ,  $(4, 10)$  is labeled zero slope because  $x$  does not change. Correct the label.

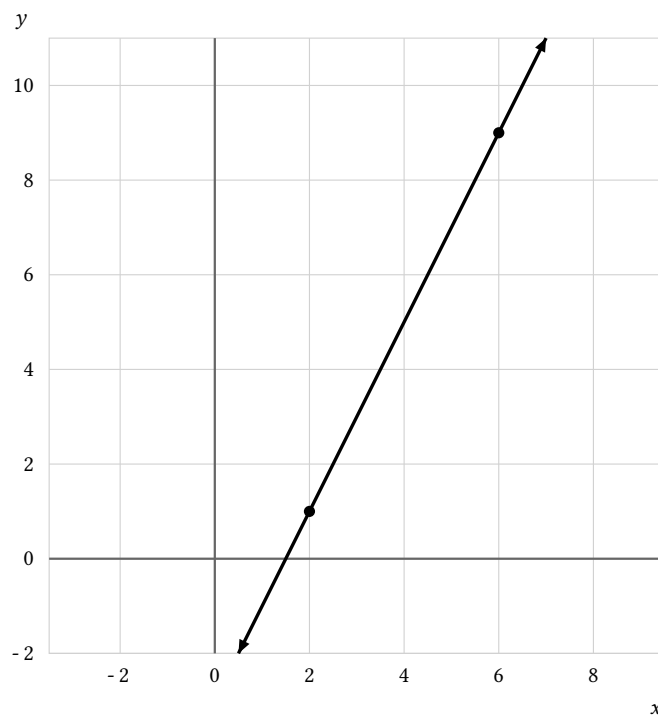


## Positive, Negative, Zero, and Undefined Slope

### Full Worked Solutions - excerpt

#### Worked example

**Problem.** An exact line graph passes through  $(2, 1)$ ,  $(6, 9)$ . As  $x$  increases, classify its slope.



**Answer.** The line through  $(2, 1)$ ,  $(6, 9)$  has positive slope.

#### Explanation and check.

The signed changes are  $\Delta x = 4$  and  $\Delta y = 8$ ; their matching signs make the slope positive.