

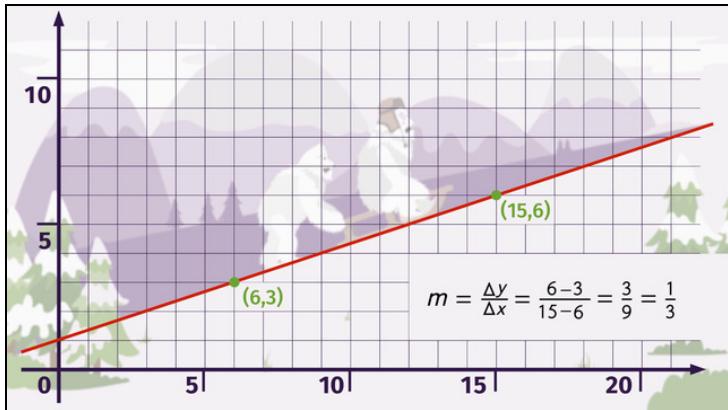


Worksheet: Slope

Mathematics / Algebra 1 / Linear Equations and Inequalities / Slope

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Slope



- 1 **Describe how the slope influences the look of a line in the coordinate plane.**
- 2 Label the picture using the correct terms.
- 3 Determine the slope of the mountainside.
- 4 Examine the slopes of the lines using the formula $m = \frac{\Delta y}{\Delta x}$.
- 5 Determine the slopes of the different routes.
- 6 Calculate the height of the mountain.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.

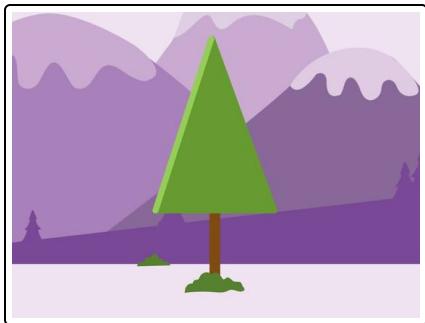


The complete package, **including all problems, hints, answers, and detailed answer explanations** is available for all sofatutor.com subscribers.



Describe how the slope influences the look of a line in the coordinate plane.

Choose the correct statements.



The slope tree can help you remember what different types of slopes in a coordinate plane look like.

The tree shows four different cases.

- A If the line rises, the slope is positive.
- B If the line falls, the slope is positive.
- C If the line falls, the slope is negative.
- D The slope never equals zero.
- E If a line is parallel to the x-axis, the slope is zero.
- F If a line is parallel to the y-axis, the slope is not defined.



Hints for solving these problems

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of 6

Describe how the slope influences the look of a line in the coordinate plane.

Hint #1

Have a look at two points lying on a line parallel to the x-axis, such as $(3, 3)$ and $(5, 3)$.

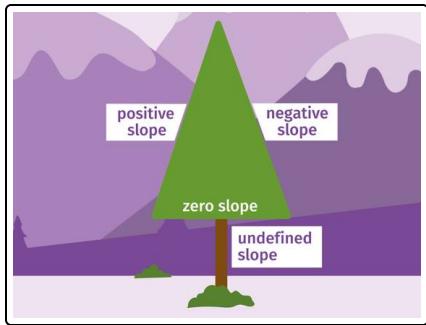
Use the equation $m = \frac{\Delta y}{\Delta x}$ to determine the slope of a line that passes through these points.

Hint #2

What's going on if you have a line parallel to the y-axis that passes through the points $(3, 3)$ and $(3, 5)$?

Use the equation $m = \frac{\Delta y}{\Delta x}$ to determine the slope.

Remember! Since you're not allowed to divide by zero, any slope that has zero in the denominator is undefined!

**Answers and detailed answer explanations for these problems**1
of 6**Describe how the slope influences the look of a line in the coordinate plane.****Answer key:** A, C, E, F

Take a look at the whole slope tree:

- on the left the line rises, so the slope is positive
- on the right the line falls, so the slope is negative

Parallel to the ground, our **x-axis**, we have a line with slope of zero.
All lines parallel to this line have the same slope.

But what's going on with the tree trunk? A line parallel to the y-axis always indicates an undefined slope.

Hint: You can always tell a line will have an undefined slope if the x coordinates of the two points are the same.