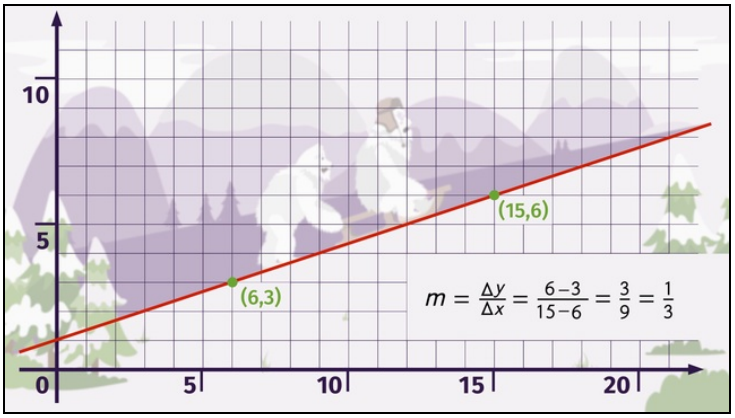
Printable Worksheets from sofatutor.com

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.

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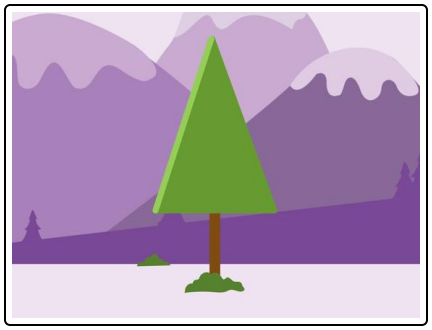
Describe how the slope influences the look of a line in the coordinate plane.

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.

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

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Hints for solving these problems

1 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!

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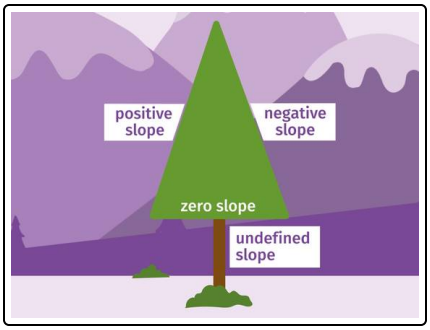
Answers and detailed answer explanations for these problems

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.

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