

Slope

Background:

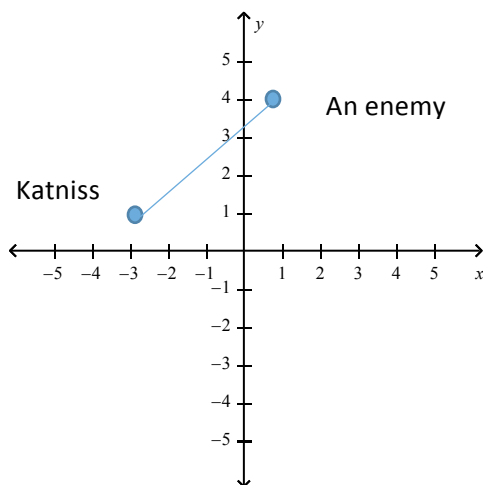
The games have begun and Katniss fought other tributes for supplies. After she received her supplies she made a run for the woods to find water:

“Behind the tributes across from me, I can see nothing, indicating either a steep downward slope or even a cliff.” (P.148)

“The ground slope down. I don’t particularly like this. Valleys make me feel trapped. I want to be high, like in the hills around District 12, where I can see my enemies approaching. But I have no choice but to keep going.”(P.152)

After Katniss left the Cornucopia and began to search for water, she noticed the ground slopes down and her enemies could see her if they were above her. The more the ground slopes down the easier it will be to see her. The less of a slope the safer she will be. Katniss has to continue her journey for water or she will die. Katniss is in a panic because knows she needs water for survival but she needs to stay hidden from the other tributes. Determine which type of downward slope is safest for her to continue to search for water without getting killed. To find slope use the formula, $\frac{y_2 - y_1}{x_2 - x_1}$.

- 1.) If her enemy is at the point (1,4) and Katniss is at the point (-3,1). What is the slope they make? Is that slope safe or dangerous?



- 2.) If Katniss is at the point (-4,0) and her enemy is at the point (4,1). What is the slope they make? Is that slope safe or dangerous?

3.) Estimate the safest slope for her to search for water and stay hidden from her enemies.

- a.) $\frac{6}{7}$
- b.) 1
- c.) 2
- d.) $\frac{1}{2}$

4.) What type of slopes should Katniss look for when searching for water?

Slope Answer Key

- 1.) $\frac{3}{4}$; Dangerous
- 2.) $\frac{1}{8}$; Safe
- 3.) D
- 4.) Horizontal