

**TASK 2.2.4: SLOPE AND Y-INTERCEPT SUMMARY**

1. In your own words, give the definition of y-intercept. Explain for any situation how to determine the y-intercept using the table, graph, and rule.

**Table:** The y-intercept is the value of the dependent variable that corresponds to 0 for the independent variable.

**Graph:** The y-intercept is the point on the graph where the function intersects the y-axis.

**Rule:** The y-intercept is the constant added to the dependent value.

2. In your own words, give the definition of slope. Explain for any situation how to determine slope using the table, graph, and rule.

**Table:** Slope is the ratio of the increase in the dependent variable to a corresponding change in the independent variable.

**Graph:** Slope is the ratio from one point to the next point of the vertical distance to the horizontal distance.

**Rule:** Slope is the constant multiplied by the dependent value

3. The standard form for a linear function is  $y = mx + b$ . In this standard form, what variable is used to represent the slope? In this standard form, what is the variable used to represent the y-intercept?

*m; b*

**Teacher notes**

It is critically important for students to make the connections among the table, graph, and function rule. These tasks were designed to allow students to investigate these connections. The last 3 questions are assessing whether or not the students have made these connections correctly. Whole class discussion should include the different responses from the students and generalizations of these connected concepts.

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1. In your own words, give the definition of  $y$ -intercept. Explain for any situation how to determine the  $y$ -intercept using the table, graph, and rule.
2. In your own words, give the definition of slope. Explain for any situation how to determine slope using the table, graph, and rule.
3. The standard form for a linear function is  $y = mx + b$ . In this standard form, what variable is used to represent the slope? In this standard form, what is the variable used to represent the  $y$ -intercept?