

X- and Y- intercepts Group Investigation

Number of Students: 5

Objective

- **MA.8.A.1.2** - Interpret the slope and the x- and y-intercepts when graphing a linear equation for a real-world problem .

Materials

- One Group Investigation Guide

Procedure

- Assign Group Member Responsibilities

Person A: Task master (keeps everyone on task & announces when time is halfway through and nearly up)

Person B: Presenter (presents the finished work to the class, making sure to explain “why” you did what you did to get the x- and y- intercepts)

Person C: Recorder (writes all ideas on chart paper)

Person D: Leader (makes sure that each group member’s voice is heard & offers praise)

Person E: Errand Monitor (gets group supplies & is the only one to ask the teacher a question that the group feels the need to be asked)

Your group is to come up with a way to find the x- and y- intercepts of the graph of a linear equation using only the equation.

If, after you group has had sufficient time to explore the task, your group needs some assistance (a hint), the Errand Monitor may call the teacher over for a “Hint Card.” The use of each “Hint Card” lowers your group’s grade by 10%. So your group can still receive a 90% with using only 1 “Hint Card.”

After you think you have found a way to use only an equation to find the x- and y- intercepts, try your method with the following equation:

$$3x - 2y = -18$$

Make a table of values and graph this equation on graph paper to justify that your x- and y- intercepts are correct.