

Suggested Solutions

Beat the System

This activity is meant for students to work with their Nspire in a group situation in order for students to talk and discuss the differences in the systems of equations.

- 1.3 This is an open-ended question. Each student in the group could have a different answer but the group should confer on what makes the most sense and is most correct.
- 1.6 Graph A has no solution because the lines are parallel.
Graph B has one solution because the lines intersect in one place.
Graph C has infinite solutions because the lines are the same.
- 1.7 Graph A has parallel lines. Parallel lines have the same slope.
- 1.8 Graph B has intersecting lines. These lines have different slopes and intersect in one location.
- 1.9 Graph C shows infinite solutions because the two lines are the same. Students can graph two lines such as $y = 3x + 5$ and $6x - 2y = -10$ and they will see that they are in fact the same line. Any ordered pair solution to the first line will be correct for the second line.
- 2.1 Any equation whose slope is $\frac{2}{3}$ will be parallel to the given line.
- 3.1 Any equation whose slope is not 3.
- 4.1 Any equation whose slope is a multiple of .5 and the y-intercept is multiplied by the same factor.