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| Date: | | | Duration of Lesson: 60 minutes | |
| Title of Unit: Systems of Equations | | | Title of Lesson: Zap the Line | |
| Lesson Objectives: To graph equations of lines to solve a system. To substitute values for *x* and *y* and make sure they make the equation true. | | | | |
| Groupings (e.g., whole class, small groups, co-teaching): Small Groups/Partners | | | | |
| Skills & Standards:  CCSS.8.EE.C.8a: Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. | | | | |
| **Progression of Learning & Teaching** | | | | |
| Opener: | * I will have the students explain how to graph the equation of a line as a review. | | | **Points to Remember** |
| Activities & Tasks: | **Instructional Lesson:**   * I will work through the Warm Up problem from the Desmos activity with the students. * Students will work with a partner finding the solution (intersection) of the line so that they can zap it. * We Do: Facilitate a class discussion   + As students work with their partner, I will circle the room if they have any questions or if they need assistance. * You Do**:**Students will complete some practice problems using substitution, elimination, and graphing.     **Activities/Tasks:**   * Desmos lesson requires students to ‘zap’ the line by listing the point of intersection. * As the lesson goes on, they will see that the value for x and y will satisfy both equations and be the point of the intersection, which allows them to zap the most lines. | | | Resources:  Desmos Activity: <https://teacher.desmos.com/activitybuilder/custom/5df166d1fa83ee79c328d37d>    Vocabulary:   * Intersection- point where to lines cross * Solution- a value or values which, when substituted for a variable in an equation, make the equation true * Elimination- the process of solving a system of simultaneous equations by using various techniques to remove the variable successively * Substitution- putting values where the letters are.     Monitoring/Scaffolding:   * I will be monitoring the students as they work and providing assistance as needed. |
| Level of Cognitive Complexity: | ☐ Creating  ☐ Evaluating  ☐ Analyzing | ☐ Applying  ☐ Understanding  ☐ Remembering | |
| Key questions: | * What does the line *y* = 8 look like? * What method would be best using that equation of the line? * What else could you try? | | |
| Closure: | * The lesson will be summarized on the last screen of the Desmos activity. * What does the intersection represent? | | |
| Next Steps: | Functions | | | **Formative Assessment Criteria for Success:**   * Students will work with a partner using a Desmos lesson and I will walk around the room to check on student progress. Completed Desmos Activity (lines all zapped) |