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# Using Stella to Find Rates of Change and Point of Intersection

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## Lesson Plan #4 Using Stella

Name: Carrie Seitz

Grade level(s)/Subject taught: 7<sup>th</sup> Grade Math

### Objectives:

- Identify the point of intersection of two lines in a graph and table.
- Explore the effect of the y intercept and rate of change when describing a situation.

### State Standards:

- 7.PS.6 Represent problem situations verbally, numerically, algebraically, and graphically
- 7.RP.6 Support an argument by using a systematic approach to  
Test more than one case
- 7.R.1 Use physical objects, drawings, charts, tables, graphs, symbols, equations, or objects created using technology as representations

- 7. A.1 Translate two-step verbal expressions into algebraic expressions
- 7.A.7 Draw the graphic representation of a pattern from an equation or from a table of data

#### Warm up:

See worksheet. Students should find that the rate of change is not constant since the time increases by 1 and the distance increases by different amounts. The data will not lie in a straight line. I will then pose the question "What would the race look like?" I hope students will see that the person is accelerating as the race goes on.

#### Mini-lesson:

See worksheet. The students will be working individually and we will complete it together. This will be a time to reinforce how to interpret the graph, table and work with Stella.

#### Work Time:

See worksheet. Students will work in pairs to answer the questions. I expect some problems with understanding what is being asked of them so I will be floating around to be sure they are on track. Students will present their answers at the end of class. This allows a discussion about the advantages of the different representations of this problem.

Closure:

See grading Rubric. Students will complete a "Ticket out the door" to end class. I will post the question

"Which model do you prefer to work with: a graph, a table, and equation or a Stella model?"