RUN!

# Warm Up

Several students in Ms. McCorkle’s class collected the following data representing the height of a growing seedling over several days. Plot the data on a coordinate plane and find the line of best fit to create a distance-time graph. Do not forget to give your graph a title, axis titles, and that your values are evenly distributed.

|  |  |
| --- | --- |
| **Day** | **Height** |
| 1 | 2 |
| 2 | 2.5 |
| 3 | 3.5 |
| 4 | 3.5 |
| 5 | 4.5 |
| 8 | 7 |
| 9 | 8 |
| 10 | 8.5 |
| 11 | 8.5 |
| 12 | 9 |

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What type of graph do we use when graphing a change over time?

How can you use your graph to the right to determine the average growth rate of the seedling?

RUN!

# Activity Record and Analysis Sheet

### Introduction

You will be traveling a designated distance by running, walking, and choosing a third way to travel such as skipping, hopping, dancing, walking backwards, etc. Your partner will time you for each trial. You will keep track of your times in the table below so that you can create a distance-time graph to represent your three trials on one coordinate plane. You will then be able to use your graphs to understand how your speed differed during each trial.

1. Before you begin, predict how your speed will compare for each of the trials.
2. Record the data for your three trials below. You will conduct each trial three separate times and determine the average. From the average you have calculated, you will then use that and the distance to find your speed.

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| --- | --- | --- | --- | --- | --- | --- |
| **Travel Mode** | **Time (s)** | | | **Average Time (s)** | **Distance (m)** | **Speed (m/s)** |
| **T1** | **T2** | **T3** |
| Walk |  |  |  |  |  |  |
| Run |  |  |  |  |  |  |
| Other: |  |  |  |  |  |  |

1. Create a distance-time graph for each of the three trials. You should graph one line for each trial using the origin (0,0) as one point and your time-distance data (seconds/meters) as your second point. The result will be one coordinate plane with three lines beginning at the origin. Be sure to label the axes and graphs with titles.

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## Summarize Your Findings

Use your distance-time graphs to compare the speed for each of your trials. Describe your observation.

Describe the slope of each trial and how it relates to your speed.

If you looked at all the distance-time graphs that your classmates had created, what would you look for to find out who is the fastest runner?