

Something's **acceleration** tells you _____

Acceleration is positive when something is _____

Acceleration is negative when something is _____

Negative acceleration is also called _____

Activity: Showing Acceleration By Using A Graph

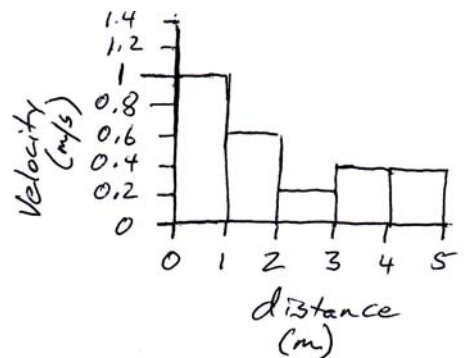
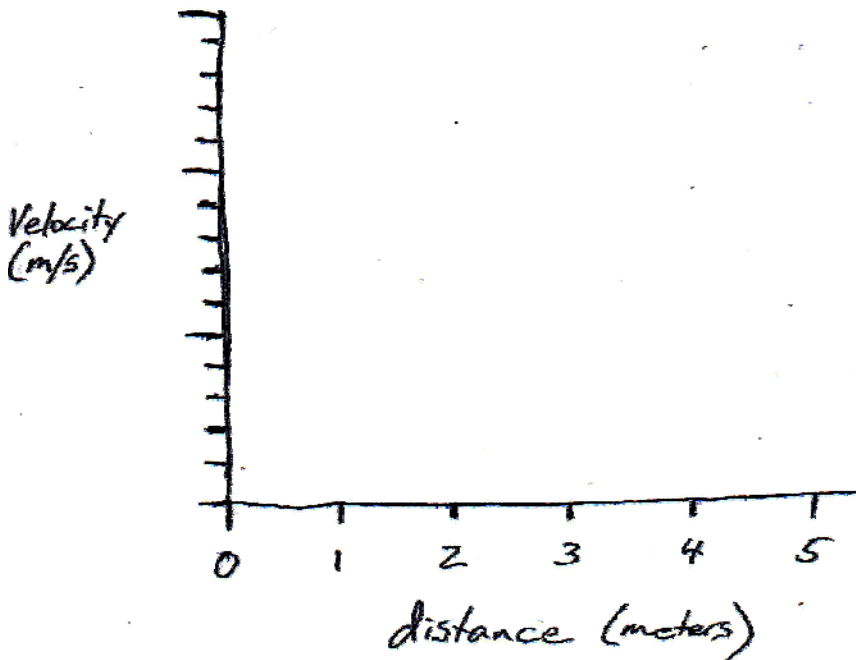
Materials: Fan cart, timer, meter stick, calculator, separate paper for calculations

1. Complete the following:

- Record your fan cart's number and mass: **number** = _____ **mass** = _____ grams
- Use 6 pieces of removable tape to mark a "race course." Mark the 0m, 1m, 2m, 3m, 4m, and 5m points.
- Start the fan cart at the 0 meter mark and let it travel past the 5 m mark. Determine the cart's average speeds between each of the meter marks. **Show your work on a separate sheet of paper!**

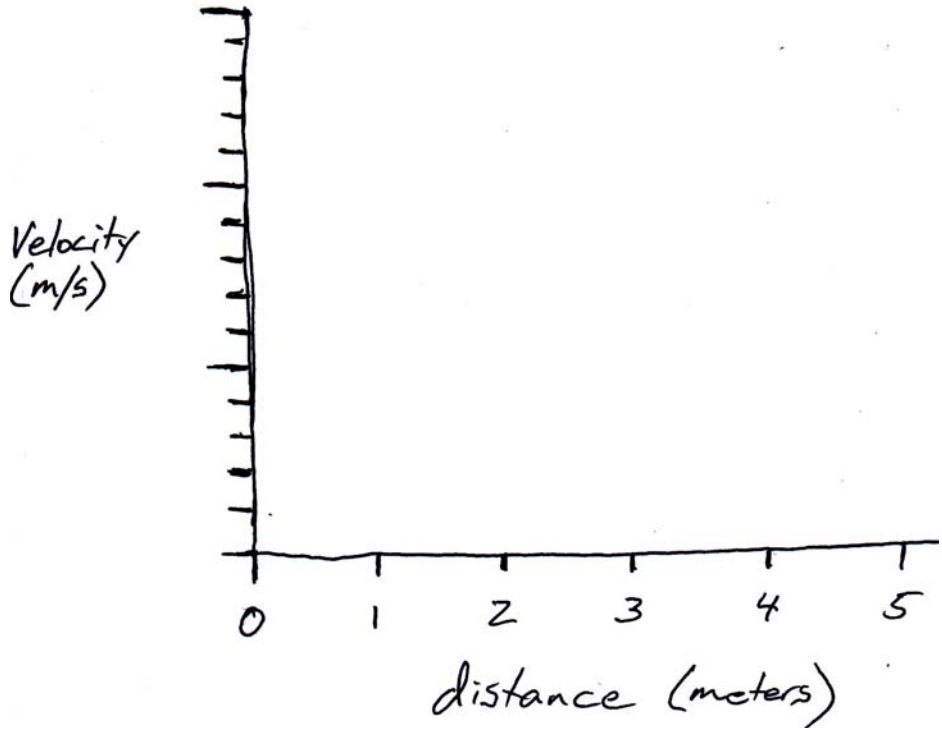
Segment of "race"	0-1m	1-2m	2-3m	3-4m	4-5m
Average Velocity					

Use the data from the table above to create a graph like this one. Each bar represents one segment of the race.



2. Now change your car's mass by adding some weight. Try to at least double the mass. Repeat the steps from #1.

Segment of "race"	0-1m	1-2m	2-3m	3-4m	4-5m
Average Velocity					



Compare your two graphs...

3. In what way(s) are your two graphs similar?

4. In what way(s) your two graphs different?