**Observations/Data:** (tape to page 49)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Trial | Time to 1.335 m (top of ramp to 1.0 m tape) | Time to 2.0 m | Time to 3.0 m | Time to 4.0 m | Time to 5.0 m |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| Average time |  |  |  |  |  |
| Average speed*(show work)* |  |  |  |  |  |
| Acceleration *(show work)* |  |  |  |  |  |

**Observations/Data:** (tape to page 49)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
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| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| Average time |  |  |  |  |  |
| Average speed*(show work)* |  |  |  |  |  |
| Acceleration *(show work)* |  |  |  |  |  |

Answer these questions on page 49 of your ISN.

Analysis:

1. Are all your velocities the same? Why or why not?
2. At what point during your investigation did you notice the marble’s velocity changing? Explain.

Synthesis (use complete sentences):

1. When velocity changes (even just a little bit), it is called acceleration. In what ways did your velocity change?
2. Did your marble speed up or slow down based on your observations? Explain.
3. Did your marble speed up or slow down based on your velocity calculations? Explain.
4. How could you change this experiment to make the marble decelerate at a faster rate?

Answer these questions on page 49 of your ISN.

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