**Analysis** (Use the compare and contrast sentence frames.)

1. How were the computer graphs created when you moved **away** from the motion detector **similar**?
2. How were the computer graphs created when you moved **away** from the motion detector **different**?
3. How do the slopes of the two lines compare?
4. How were the computer graphs created when you moved **toward** the motion detector **similar**?
5. How were the computer graphs created when you moved **toward** the motion detector **different**?
6. How do the slopes of the two lines compare?
7. What does the slope of the line on a distance-time graph represent? What did you see in the activity to support this?
8. Compare and contrast the graphs from parts 1 and 2 (**away** from the motion detector) to the graphs from part 3 and 4 (**toward** from the motion detector).

**Summarize**

Constant, steady motion produces a line on a distance-time graph that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The slope of the line represents the object’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the object is moving, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the slope.

**Application**

1. Describe the motion that would produce the graphs below. (See the sequencing sentence frames.)

|  |  |
| --- | --- |
| https://lh6.googleusercontent.com/2GE6iiHs_h4bC_d_7hYwmZUEpKSMBs2gXJXtspm5m6-x-z7kXaiYMVeVnN5pAeVwrp8y9tq2CVSvJKvmpjY7xu4rJ7aV-xbdNysxUBfwaQXiK_03-DkVne4zgG6f4K6s |  |
| https://lh5.googleusercontent.com/22W1wJ-jBzIxchbONIbSLzuDSKYSXzNQaB_RIA5z11AJwWDhiBljOaj-H2YHEbquLZpj9TAbXWgiht_cwCPZZaIMA6KX7uio4HK3OxFg1mqvdo801gYxjrubJDFrKYhE |  |

1. Predict what you think the line on a distance-time graph would look like if the motion was **not** constant and steady.

