1. A friend prepares to place an online order for CD's.
2. What are the **units** for the slope of the graph to the right?
3. What does the slope of the graph tell you in this situation?
4. Write an equation that describes the graph.
5. What is the independent variable? What is the dependent variable? How did you decide?

2. The following times were measured for spheres of different masses to be pushed a distance of 1.5 meters by a stream:

|  |  |
| --- | --- |
| **Mass (kg)** | **Time (s)** |
| 5 | 10.2 |
| 10 | 17.3 |
| 15 | 23.8 |
| 20 | 31.0 |

1. **Graph the data** on Logger Pro. Make sure to include all required components of a graph.
2. **Write an equation** for the graph that describes the data.
3. Write a clear sentence that describes the relationship between mass and time.
4. Using your line of best fit equation, if you had a mass of 30 kg, how long would it take to travel 1.5 meters? Show work!
5. What is the independent variable? What is the dependent variable?

3. **Conversions:** Complete the following conversions. Make sure to **show your work** (calculation, fraction, dimensional analysis, substitution, decimal movement, etc.) and use the conversion factors listed below as needed. **1 ft = 12 in 3 ft = 1 yard 1 km = 0.621 miles**

a. 150 cg = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ kg b. 12 L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mL

c.. 240 in = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ft d. 300 km = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ miles

4. Measurements in the lab. Using the equipment set up in the lab, measure the following:

1. Volume of water in the graduated cylinder
2. Temperature of water in beaker
3. Length of paper clip

5. Two new forms of currency have recently been circulating in the Bettendorf area. In this new currency system 4 Bulldogs are equal to one Spartan.
 a. Visually show this relationship in a diagram.

b. One Bulldog or one Spartan...which one is a larger currency? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. To pay for your lunch, would you need more Bulldogs or more Spartans? Explain why.

\*\*\*Make sure you review all notes, labs, worksheets, and practice problems from Unit 1. Remember, you do have a list of learning targets that you should probably reference while you are studying! :)