

Name \_\_\_\_\_

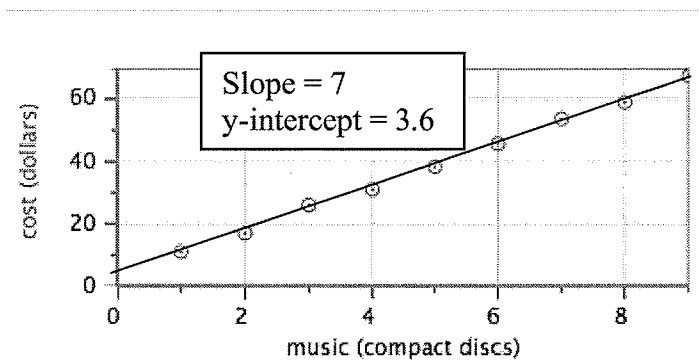
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# Scientific Methods Worksheet 3: Graphical Analysis

1. A friend prepares to place an online order for CD's.

a. What are the units for the slope of this graph?

b. What does the slope of the graph tell you in this situation?

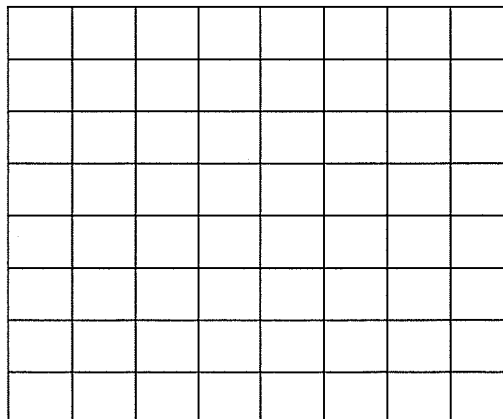


c. Write a mathematical model that describes the graph.

d. Provide an interpretation for what the y-intercept could mean in this situation.

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



a. Graph the data by hand on the grid provided and write a mathematical model for the graph that describes the data.

b. Write a clear sentence that describes the relationship between mass and time.

3. A student performed an experiment with a metal sphere. The student shot the sphere from a slingshot and measured its maximum height. The sphere was shot six times at six different angles above the horizon.

- a. What is the relationship being studied?
- b. What is the independent variable in this experiment?
- c. What is the dependent variable in this experiment?
- d. What variables must be held constant throughout this experiment?

4. a. What type of relationship does this graph suggest?

b. What variables would you plot to linearize the data?

