## Graphing

Name: $\qquad$
For each of the following sets of data, graph the data using an appropriate scale. For the each graph, title the graph, label the axes, and plot the data. For line graphs, draw a best-fit line and determine the slope. Answer the questions about the graph.

1) Properties of Aluminum (Line)

| Mass $(\mathrm{g})$ | Volume $(\mathrm{mL})$ |
| :--- | :--- |
| 1.53 | 0.5 |
| 45.65 | 16.9 |
| 23.52 | 8.9 |
| 52.90 | 19.1 |
| 6.34 | 2.7 |
| 39.58 | 14.2 |

a) Slope of best-fit line
b) What is the y-intercept of the graph? What should it be and why?
2) Densities of Metals (Bar)

| Metal | Denisty $(\mathrm{g} / \mathrm{mL})$ |
| :--- | :--- |
| Steel | 7.8 |
| Bronze | 7.4 |
| Mercury | 13.5 |
| Lead | 11.3 |
| Copper | 9.0 |
| Gold | 19.8 |

a) How does a bar graph differ from a line graph?
b) How were you able to determine the scale of the $y$-axis?


3) Changes in volume of a balloon as temperature decreases (Line)

| Volume $\left(\mathrm{cm}^{3}\right)$ | Temperature (K) |
| :--- | :--- |
| 4665 | 400 |
| 4082 | 350 |
| 3487 | 300 |
| 2897 | 250 |
| 2339 | 200 |
| 1765 | 150 |
| 1156 | 100 |
| 583 | 50 |

a) Slope of best-fit line
b) What is the y-intercept of the graph?
4) Percentage of world energy sources (Circle)

| Fuel | Percent (\%) |
| :--- | :--- |
| Biofuels | 0.3 |
| Biomass | 4 |
| Coal | 25 |
| Geothermal | 0.3 |
| Hydroelectric | 3 |
| Natural Gas | 23 |
| Nuclear | 6 |
| Oil | 37 |
| Solar | 1 |
| Wind | 0.4 |

a) How does this graph quickly show the differences in sources?
b) $85 \%$ of all our fuel comes from what classification of fuel?

c) What total percentage does renewable resources account for the total energy sources?

