

Name _____
Date _____

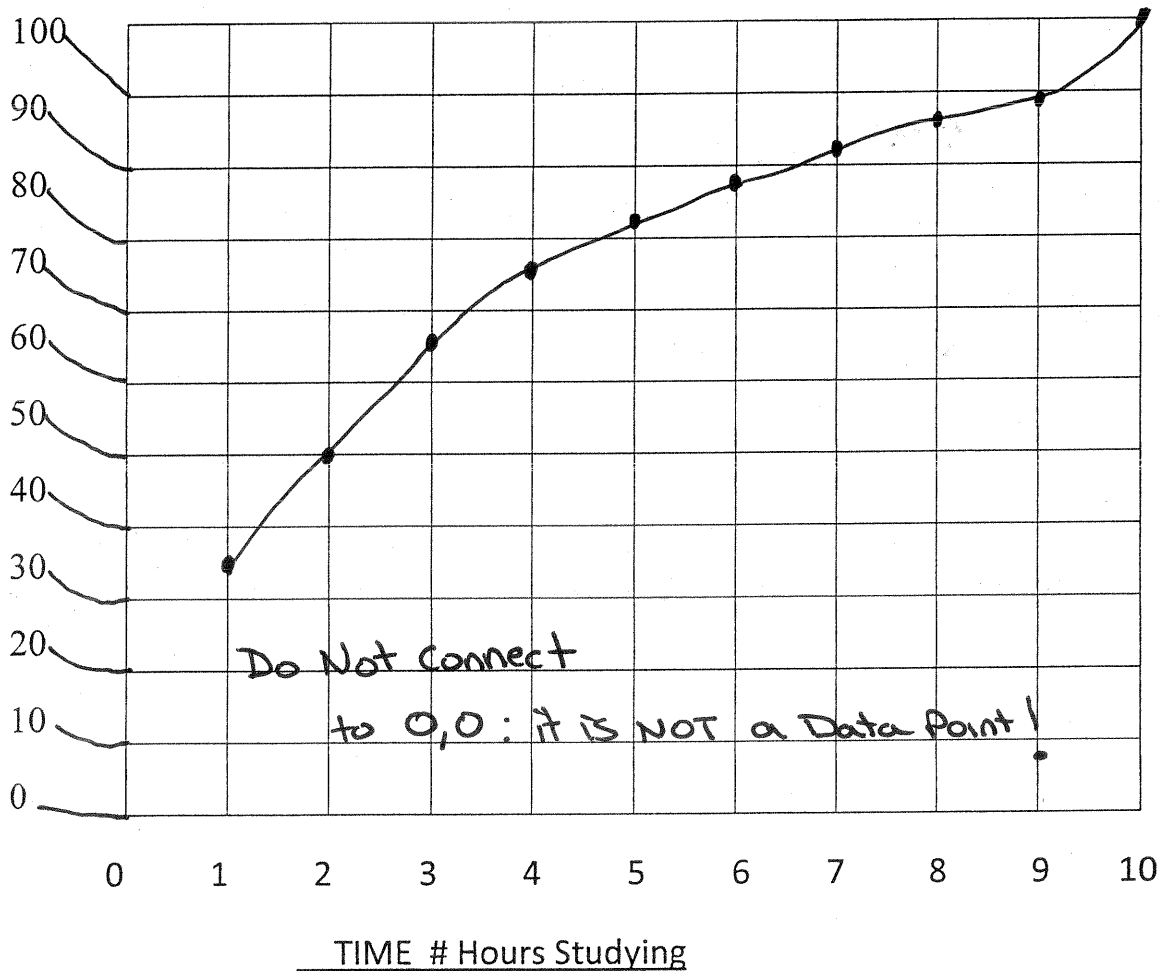
KEY

Mrs. Brighton
Earth Science

Objective: How do you graph a change?

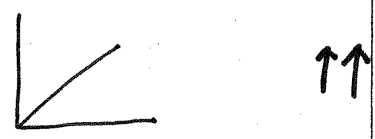
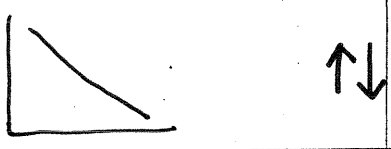
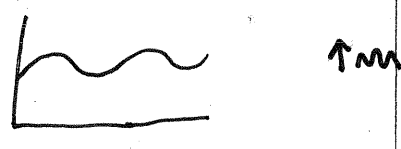
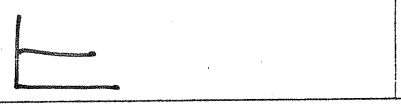
Graph the relationship between the number of hours a student studies and the student's test grade. Label the axis with the appropriate heading, plot the data and connect the points to create a line graph.

| <u># Hours Studying</u> | <u>Student Test Grade</u> |
|-------------------------|---------------------------|
| 1 | 35 |
| 2 | 50 |
| 3 | 65 |
| 4 | 75 |
| 5 | 83 |
| 6 | 88 |
| 7 | 92 |
| 8 | 95 |
| 9 | 98 |
| 10 | 100 |



1. State the relationship between the number of hours studying and test grades.

DIRECT

| Graphic Relationships | Variables | Graphic Example |
|---|---|---------------------------------|
| <p>DIRECT</p>  | <p>As one variable increases the other variable increases</p> | <p>population vs. pollution</p> |
| <p>Indirect</p>  | <p>As one variable increases the other variable decreases</p> | <p>Altitude vs. temperature</p> |
| <p>Cyclic</p>  | <p>Variable changes in a predictable pattern</p> | <p>Moon phases</p> |
| <p>Stays the same</p>  | <p>As one variable increases the other stays the same</p> | <p>Time vs. # of planets</p> |

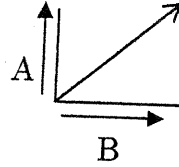
Rate of change:

$$\text{gradient} = \frac{\text{change in f.v.}}{\text{change in distance}}$$

Key

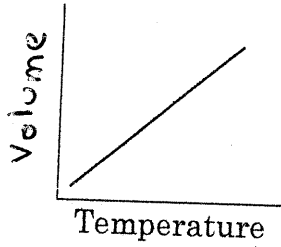
II Line Graphs

When interpreting a graph, read the bottom variable first. This is your independent variable. Then, read the side variable and describe what the line in the center of the graph is doing.

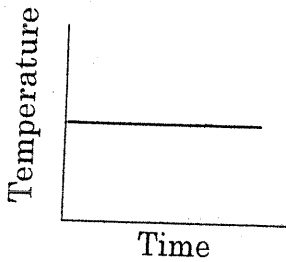


As "B" increases,
"A" increases

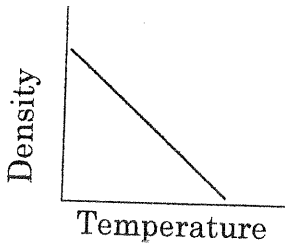
Write out the relationships for each of the following graphs:



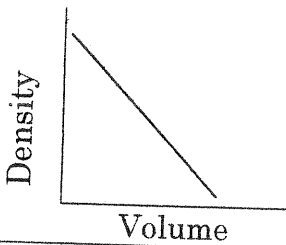
As temperature increases,
Volume increase



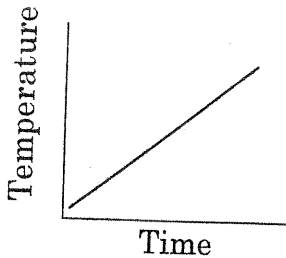
As Time increases
temp stays the
same.



As Density decreases,
temp increases.



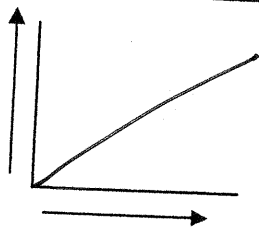
As Density decreases
volume increases.



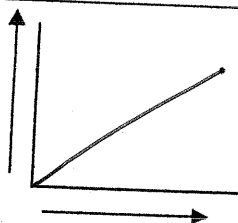
As Temp increases
time increases.

Draw a graph for each of the following relationships:

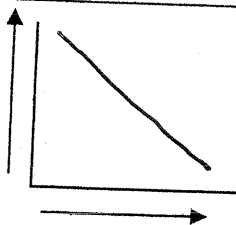
As depth increases,
pressure increases



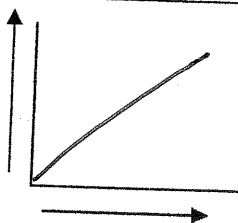
As depth increases,
density increases



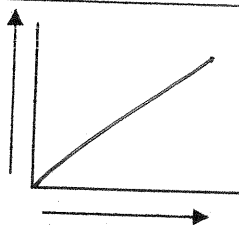
As altitude increases,
temperature decreases



As population increases,
pollution increases



As the amount of studying
increases, grades increase



As time increases,
velocity remains the same

