

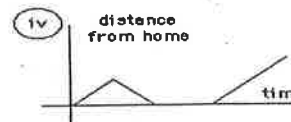
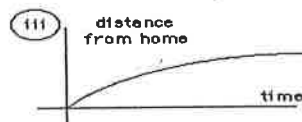
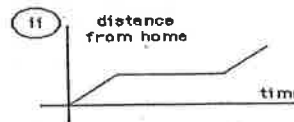
Interpreting Science Graphs

Scientific Graphs:

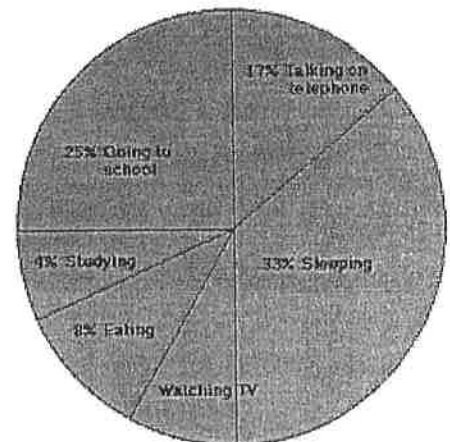
Most scientific graphs are **line** graphs that show a picture of the direct **RELATIONSHIP** between the independent variable and the dependent variable. **Bar** graphs, on the other hand, are used to show a **COMPARISON** among data that are not directly related. For many scientific graphs, the data from an experiment or natural observation is plotted on a graph. Then the scientist **INTERPRETS** the graph by looking for a "**pattern**" in the data. This pattern in the data is often made visible by drawing a **best-fit line** which does not necessarily touch each data point, but instead approximates the average value for each measurement. In addition to drawing graphs, it is also important that you be able to interpret data that is represented in graph form. The following examples are provided to help you develop the ability to read information shown on a graph.

Practice Interpreting Graphs: answer the questions for each graph that follows

- Identify the graph that matches each of the following stories:
 - I had just left home when I realized I had forgotten my books so I went back to pick them up.
 - Things went fine until I had a flat tire.
 - I started out calmly, but sped up when I realized I was going to be late.



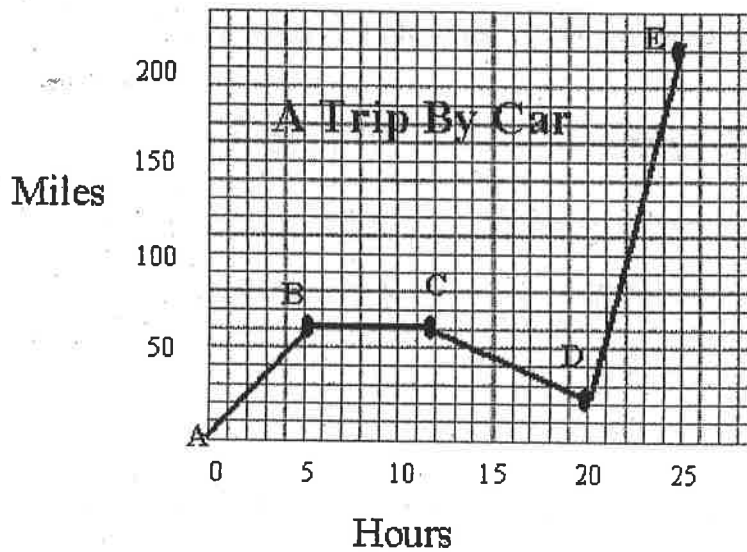
- The graph at the right represents the typical day of a teenager. Answer these questions:
 - What percent of the day is spent watching TV?
 - How many hours are spent sleeping?
 - What activity takes up the least amount of time?
 - What activity takes up a quarter of the day?
 - What two activities take up 50% of the day?
 - What two activities take up 25% of the day?



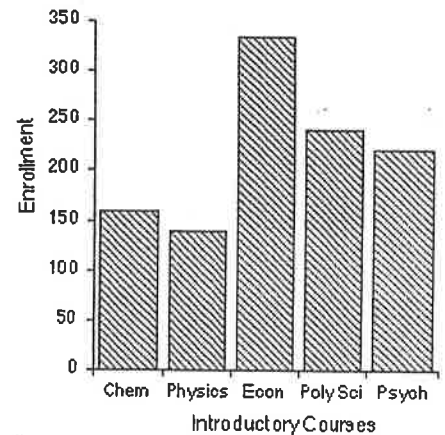
3. Answer these questions about the graph below:
- How many sets of data are represented?
 - On approximately what calendar date does the graph begin?
 - In what month does the graph reach its highest point?



4. Answer these questions about the graph below:
- How many total miles did the car travel?
 - What was the average speed of the car for the trip?
 - Describe the motion of the car between hours 5 and 12?
 - What direction is represented by line CD?
 - How many miles were traveled in the first two hours of the trip?
 - Which line represents the fastest speed?

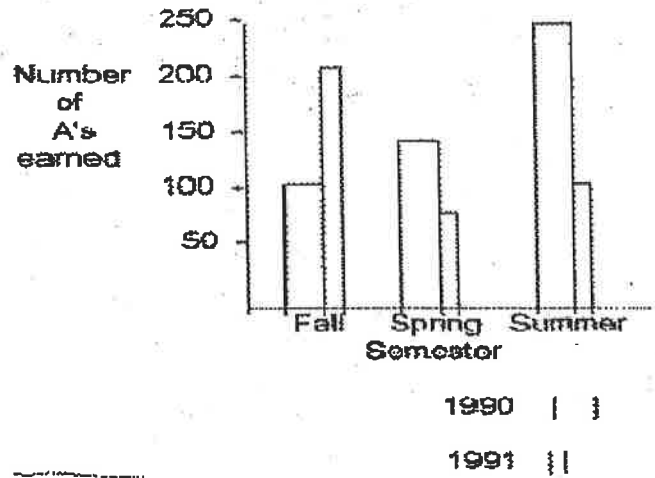


5. The bar graph at right represents the declared majors of freshman enrolling at a university. Answer the following questions:
- What is the total freshman enrollment of the college?
 - What percent of the students are majoring in physics?
 - How many students are majoring in economics?
 - How many more students major in poly sci than in psych?



6. This graph represents the number of A's earned in a particular college algebra class. Answer the following questions:

- How many A's were earned during the fall and spring of 1990?
- How many more A's were earned in the fall of 1991 than in the spring of 1991?
- In which year were the most A's earned?
- In which semester were the most A's earned?
- In which semester and year were the fewest A's earned?



7. Answer these questions about the graph below:

- How much rain fell in Mar of 1989?
- How much more rain fell in Feb of 1990 than in Feb of 1989?
- Which year had the most rainfall?
- What is the wettest month on the graph?

