

Constructing Graphs

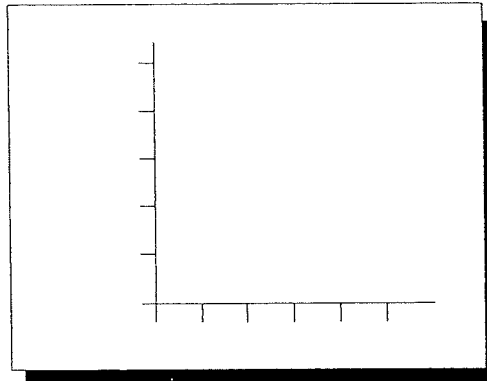
Complete the missing graph information for each skill

1. Label the X and Y Axes for the following investigations

INVESTIGATION: A study was conducted to see if the number of surfers on the beach was affected by the average height of the waves.

How Is the Number of Surfers on the Beach Affected by the Height of the Waves?

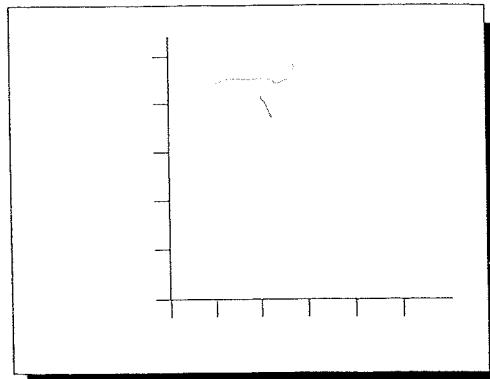
Average Height of Waves (m)	Number of Surfers
1	13
2	23
3	56
4	31



How Does Depth of Collection Affect the Density of Rocks?

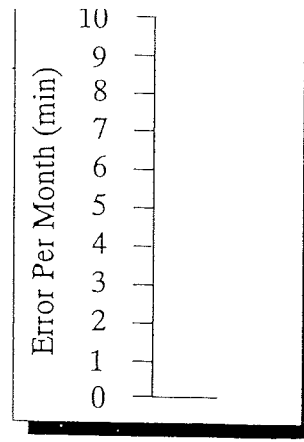
INVESTIGATION: Rocks from several different depths in a mine were collected. The density of each rock was recorded.

Depth of Collection (m)	Density of Rocks (g/cm ³)
0	2.2
30	2.0
120	2.7
600	3.5
3000	4.0

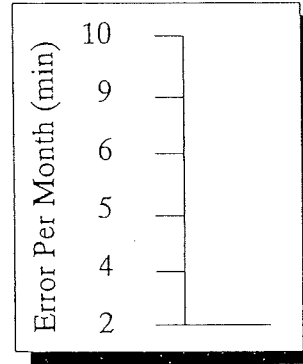


2. Determine the interval scale for each axis

- A. Scale is OK
- B. Size of intervals not equal
- C. Too many intervals
- D. Too few intervals
- E. Starts with too small an interval



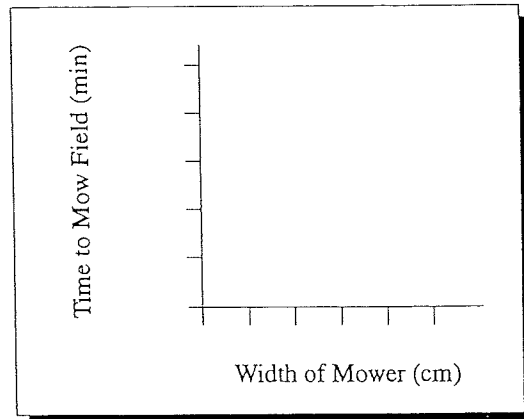
- A. Scale is OK
- B. Size of intervals not equal
- C. Too many intervals
- D. Too few intervals
- E. Starts with too small an interval



Try one more problem on determining an interval scale. Label the axes with appropriate scales for graphing these data.

The Effect of Mower Width on Mowing Time

Width of Mower (cm)	Time to Mow Field (min)
37	240
43	210
110	175
125	160
180	143

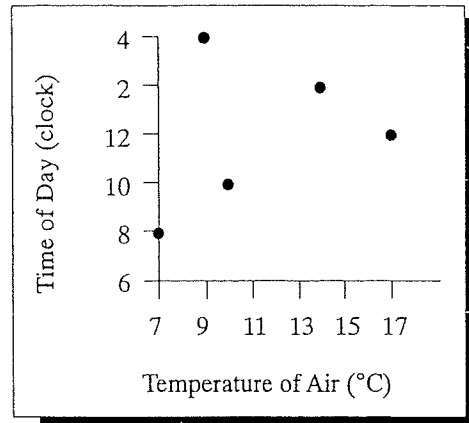


3. Plotting data pairs as points on a graph

INVESTIGATION: The temperature of the air was measured at several times during the day.

Time of Day (clock time)	Temperature of Air ($^{\circ}\text{C}$)
8	7
10	10
12	17
2	14
4	9

The Effect of Time of Day on Temperature of Air



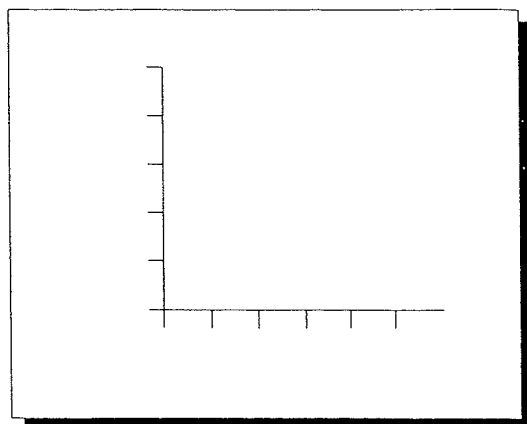
- A. Graph OK
- B. Variables on wrong axes
- C. Incorrect scale
- D. Data points in wrong location

4. Constructing a graph

- a. Write labels for the variables from this investigation along the appropriate axes of the graph.

INVESTIGATION: The temperature of the water was varied in several containers to see if the time to evaporate the water was affected.

- b. What is the rule used to label the axes of a graph?



Label the axes with appropriate interval scales for graphing these data. DO NOT locate the points.

INVESTIGATION: The temperature of the air was measured on different days to see if it affected the number of swimmers on the beach.

Temperature of Air (°C)	Number of Swimmers
12	30
19	80
20	225
26	450
31	475

Plot the data pairs from this investigation on the graph.

INVESTIGATION: The number of letters that could be correctly identified on an eye chart at different distances was investigated.

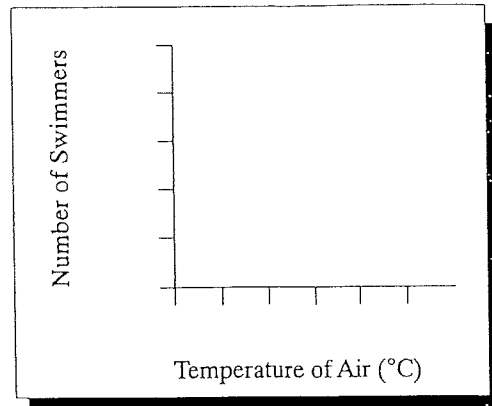
Distance of Eye from Chart (m)	Number of Letters Identified
1	18
2	22
3	34
4	30
5	26

Construct a graph of the data in this table.

INVESTIGATION: Ice cubes of different sizes are melted in a pan of water.

Mass of ice Cubes (g)	Time to Melt (min)
35	2
45	3
52	5
61	9
70	11

How Does the Air Temperature Affect the Number of Swimmers?



The Effect of Eye Distance on Letters Identified

