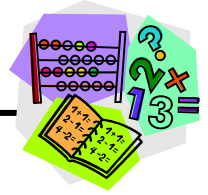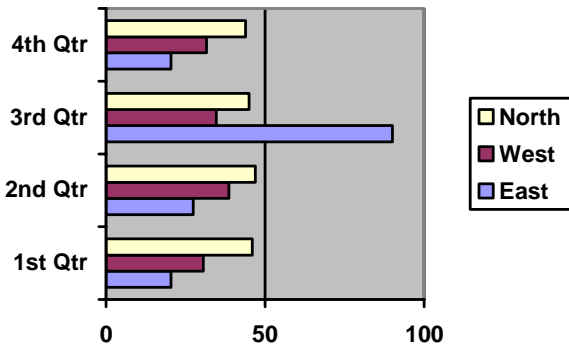# Reading and Interpreting Graphs

Information can be displayed in many ways, such as in graphs.
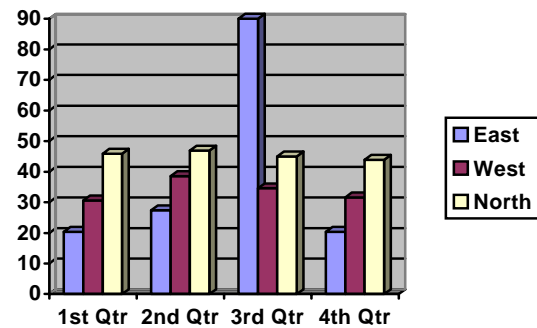
Graphs are visual representations (pictures) of data. Graphs help us to compare data, draw conclusions, make predictions and see trends.
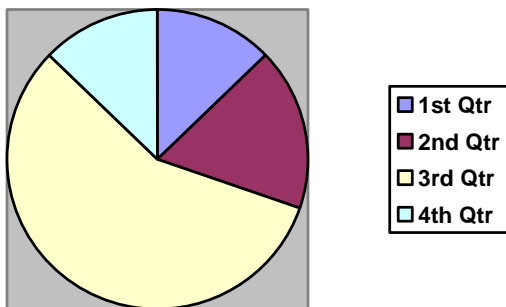
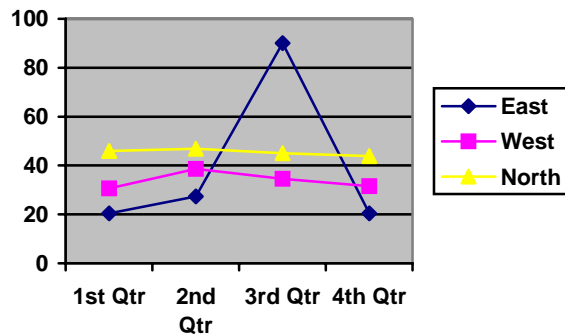## Types of graphs include:

Bar Graphs

Bar Graphs (Column)

Circle Graphs

Line Graphs

A)

y

Earnings

$35.00
$30.00
$25.00
$20.00
Earnings $15.00
$10.00
$5.00
$0.00

1   2   3   4   5   6

x
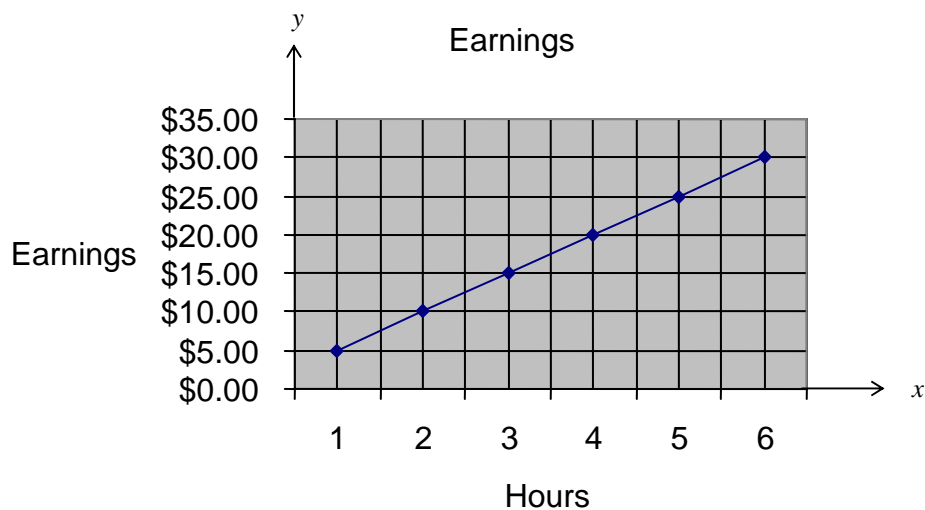
Hours

Use the following information to help you understand the graph above.

- The *x*-axis represents the number of hours worked.

- The *y*-axis represents earnings.

    1. Select an hour on the *x*-axis; e.g., hour 3.

    2. Find the ● directly above the hour.

    3. Follow the horizontal line to the amount on the *y*-axis; e.g., $15.00.

    4. State the relationship. During hour 3, $15.00 was earned.

Predictions can be made by examining patterns on graphs and determining the relationship between the data. Equations for relationships can also be identified.

For example, based on the previous graph, it can be predicted that by hour 7, $35.00 will be earned and by hour 8, $40.00 will be earned.

Many people estimate or calculate the amount of money they will make before receiving their paycheques. This is done by examining, calculating, predicting and drawing conclusions about the number of hours worked and the hourly wage earned.

B) This graph shows how much money Saul will make working 3, 4, 5 and 6 hours. How many dollars per hour does Saul earn? The graph shows that Saul makes $18 for 3 hours; $24 for 4 hours; $30 for 5 hours and $36 for 6 hours. The pattern is $6 for every hour.

Saul's Earnings

Predict how much money Saul will make if he works 8 hours and if he works 10 hours. To solve the problems above, extend the graph and/or set up an equation.

x	$y = 6x$
3	18
4	24
5	30
6	36
8	$= 6 \times 8$
10	$= 6 \times 10$

Practice: Reading and Interpreting Graphs

1. The following questions can be answered by reading the graph. Answer and discuss them with classmates.

Distance Jogged in 6 days

y

Distance (in km)

6
5
4
3
2
1
0

1   2   3   4   5   6

Days

x
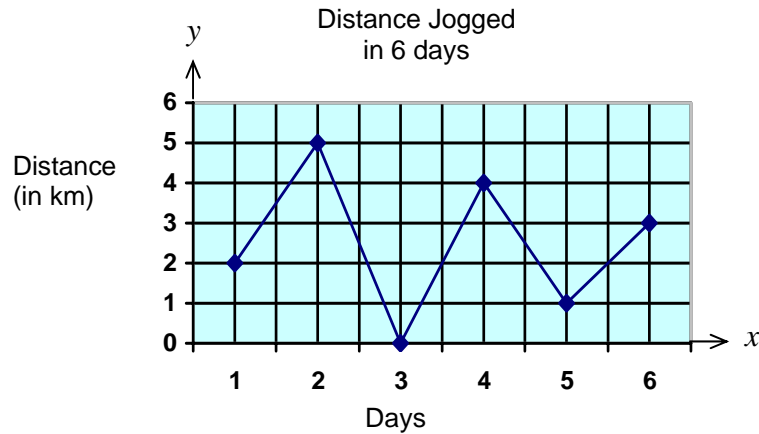
a)   What information is the graph showing?

b)   What is the label of the x-axis?

c)   What is the label of the y-axis?

d)   How far did the runner jog on the 1st day? On the 4th day?

e)   Which day did the runner jog the farthest? Not at all?

f)   If the jogger rested on Sundays, which day was Sunday?

2. Use a variety of sources such as the Internet, atlases and newspapers to locate a variety of different graphs. With your classmates or teacher, examine and interpret the graphs. Answer these questions.

- What types of graphs are they?
- What is the topic of each graph?
- What are the headings of the axes?
- What is the range of data on each?
- Does each show a snapshot or change over time?