ATOMIC ENERGY EDUCATION SOCIETY
e-Learning Content(Science)
Class –VII
Chapter – 13
Motion and time
Module 3of 3

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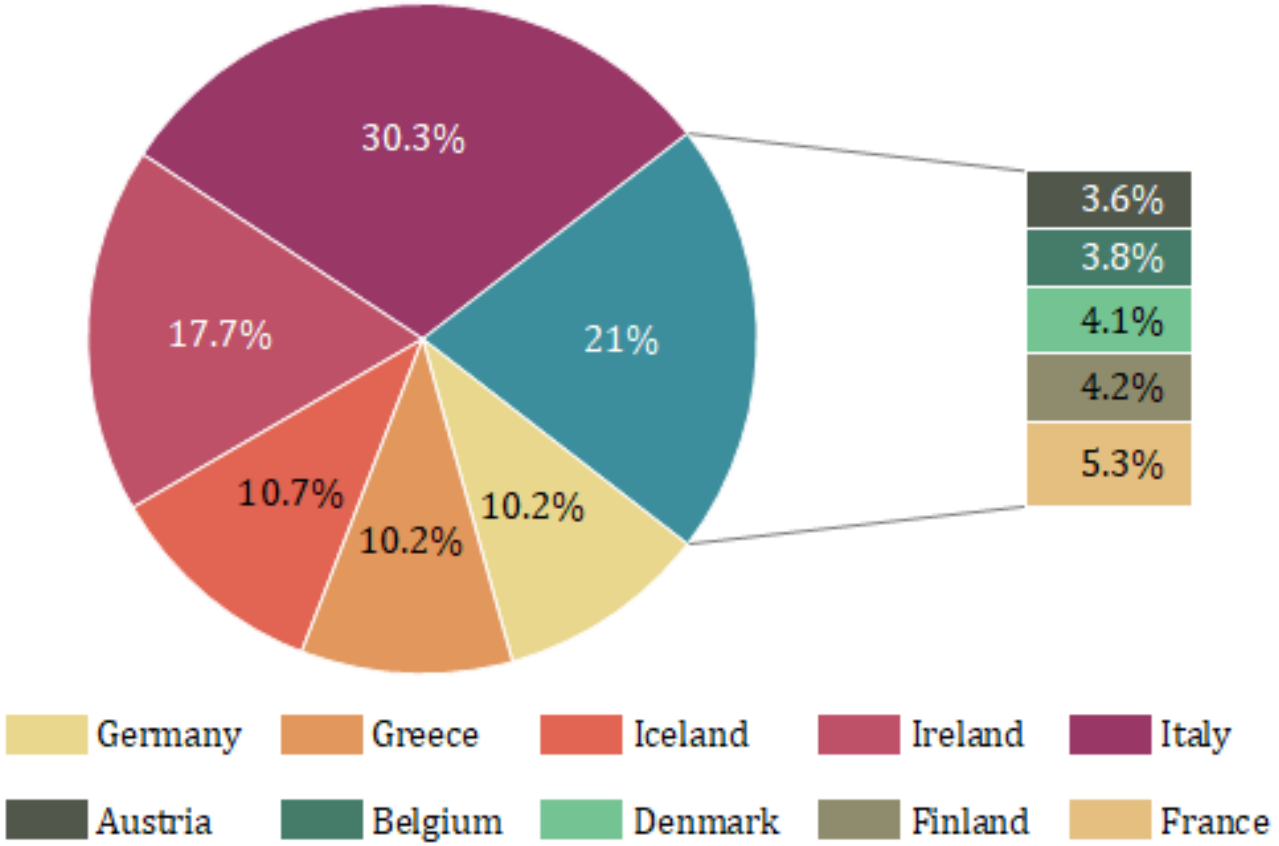
10.GRAPHICAL REPRESENTATION

- **Graphical representation of a data**: We can represent the data in pictorial form by different ways. Some are as follows:

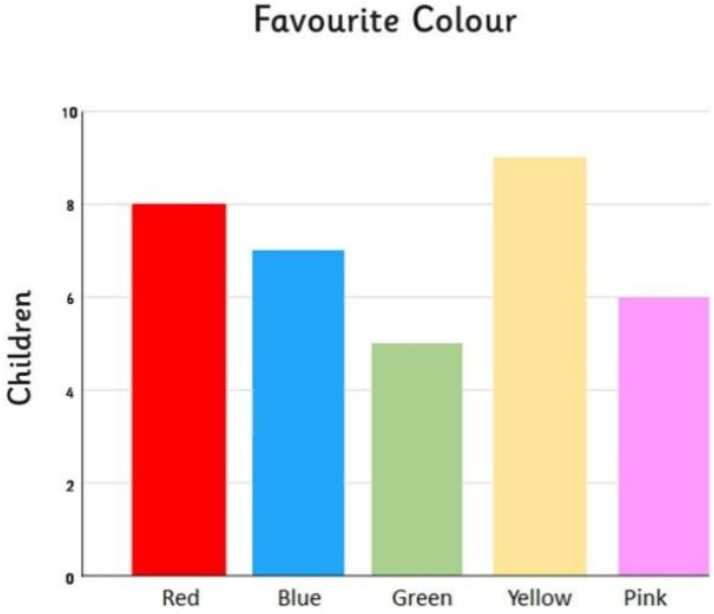
  a. **Pie chart** : A pie chart is a circular statistical graphic which is divided into slices to illustrate the numerical proportion. It is named so because it resembles the dish named pie which is sliced in the same way .

  Eg. In class VI we have seen how the components of air are represented in pie chart.

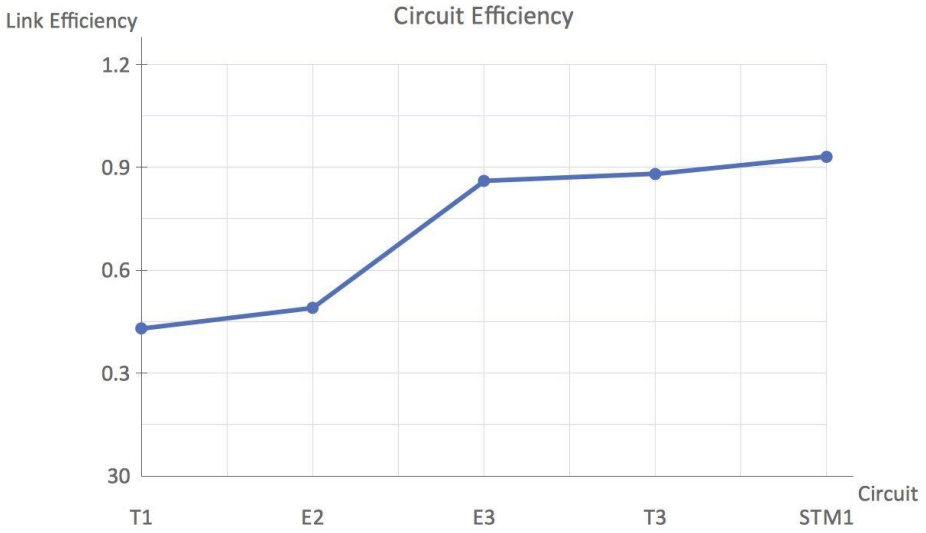
PIE CHART


30.3%
17.7%
21%
10.7%
10.2%
10.2%
3.6%
3.8%
4.1%
4.2%
5.3%
Germany
Greece
Iceland
Ireland
Italy
Austria
Belgium
Denmark
Finland
France

b. **Bar graph**: It is a chart or graph that presents categorical data with rectangular bars with different height proportional to the value that they represent. It can be plotted vertically or horizontally.

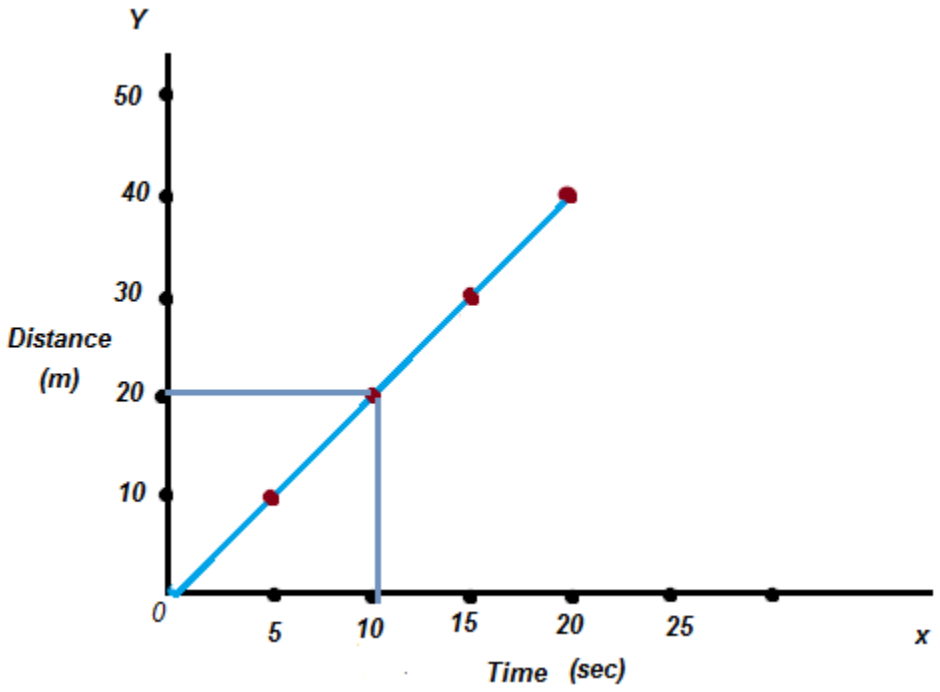


c. **Line graph**: A line graph is a type of chart which displays information as a series of data points called ‘markers’ These markers are connected by a straight line to visualize the pattern



11. DISTANCE TIME GRAPH

Motion of an object can be represented in the pictorial form by their distance time graph.



STEPS TO MAKE DISTANCE TIME GRAPH:

a. Draw two perpendicular lines to represent X axis and Y axis ie. OX and OY.
b. Show both the quantities in the separate axes, Eg. Time in X axis and distance in Y axis.
c. Choose the proper scale for both quantities.

eg. 1 m = 1 cm

1 Km= 1 cm

Some points are to be taken care while choosing the scale:-

i. The difference between the highest and the lowest values of each quantity.

ii. The intermediate values of each quantity, so that with the scale chosen it is convenient to mark the values on the graph.

ii. To utilise the maximum part of the paper on which the graph is to be drawn.

d. Mark the values for time and distance in the respective axes according to the scale.

e. Now mark the position on the graph paper to represent each set of values for distance and time.

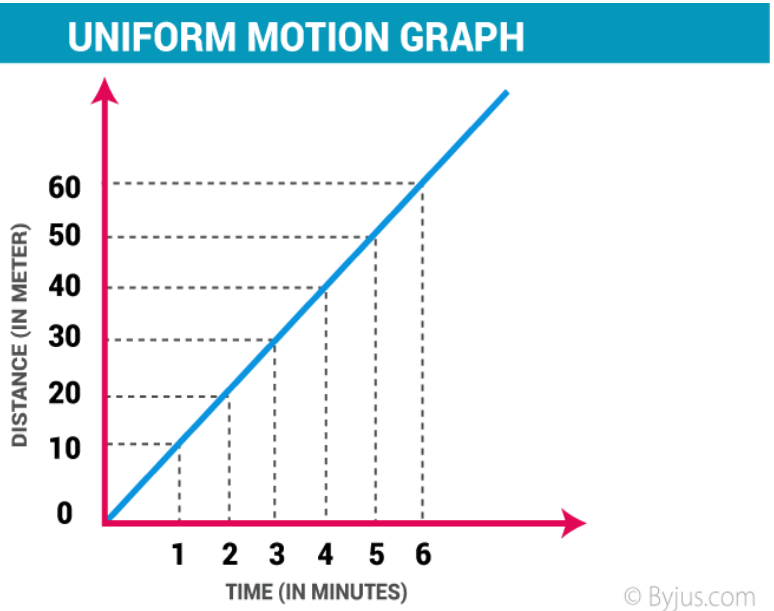
f. Join all the points on the graph.

g. If we obtain a **straight slanting line**, it is a uniform motion.

h. If we obtain a graph of any shape, he motion is non- uniform.

Line graphs


Distance in km
60
50
40
30
20
10
O
2
4
6
8
10
12
16
18
Time in second
A
Non- Uniform Motion


UNIFORM MOTION GRAPH
DISTANCE (IN METER)
60
50
40
30
20
10
0
1
2
3
4
5
6
TIME (IN MINUTES)
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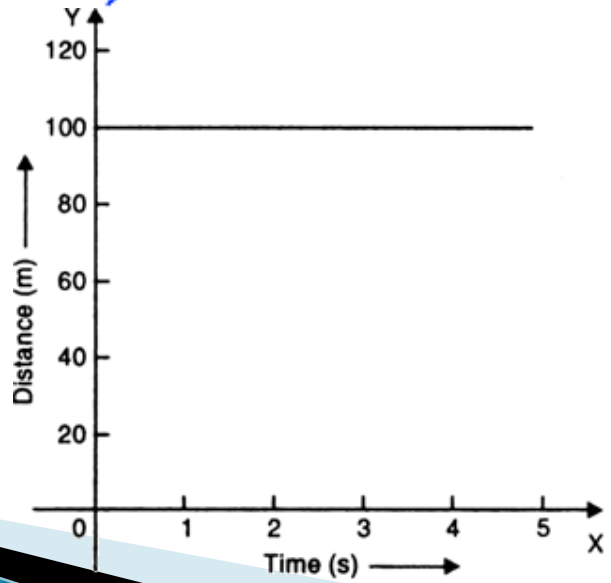
Y
120
100
80
60
40
20
Distance (m)
0
1
2
3
4
5
X
Time (s)

THANK YOU!