CAVALRY DEFENCE ACADEMY, (CDA)
DEHRADUN - 8381042191

DATA REPRESENTATION
(BAR GRAPH,LINE GRAPH, PIE CHAR

DATA REPRESENTATION

1. **Frequency -** Frequency tells us the no. of times a particular quantity repeats itself.

2. **Frequency Distribution Table-** Frequency can be represented by the frequency distribution table.

MARKS	Number of Students (Frequency)
0-10	15
10-20	10
20-30	40
30-40	10
40-50	2

STATICS

Classmark: Classmark is defined as the mid-value of each class interval is called its class mark.

Formula : Class mark = (Upper limit + Lower limit) / 2

Class size: Class size is defined as the difference between the true upper limit and true lower limit of a class interval.

Formula - Class size = Upper limit – lower limit

Range

Range = Highest Value - Lowest Value

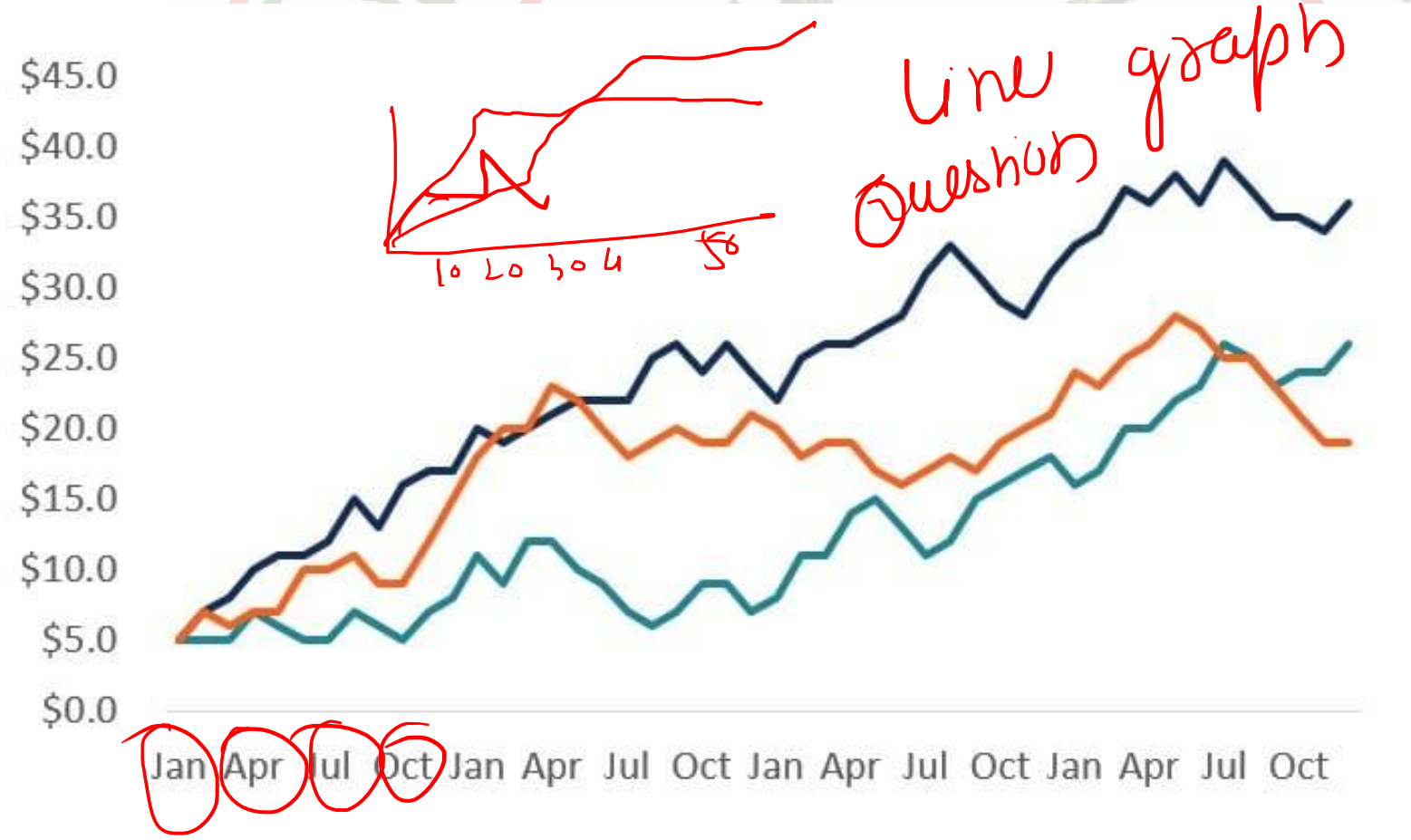
Find the range of the data 2, 7, 11, 12, 19, 22, 25, 27, 33, 35

Highest Value = 35 , Lowest Value = 2

Range = Highest Value - Lowest Value = 35 - 2 = 33

LINE GRAPHS

The most common, simplest, and classic type of chart graph is the line graph. This is the perfect solution for showing multiple series of closely related series of data. Since line graphs are very lightweight (they only consist of lines, as opposed to more complex chart types, as shown below), they are great for a minimalistic look.



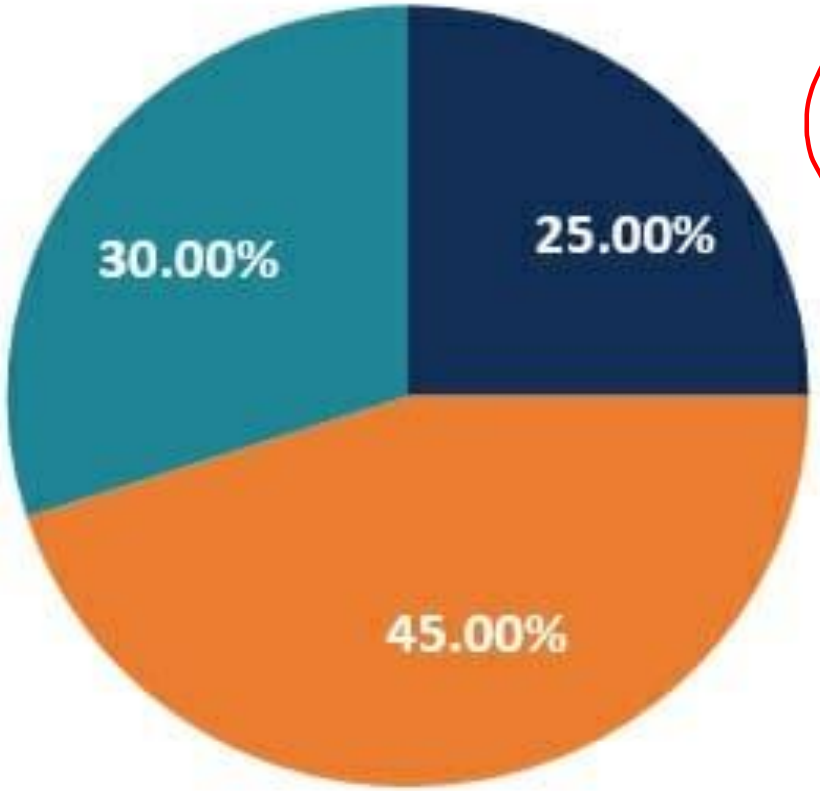
BAR GRAPHS

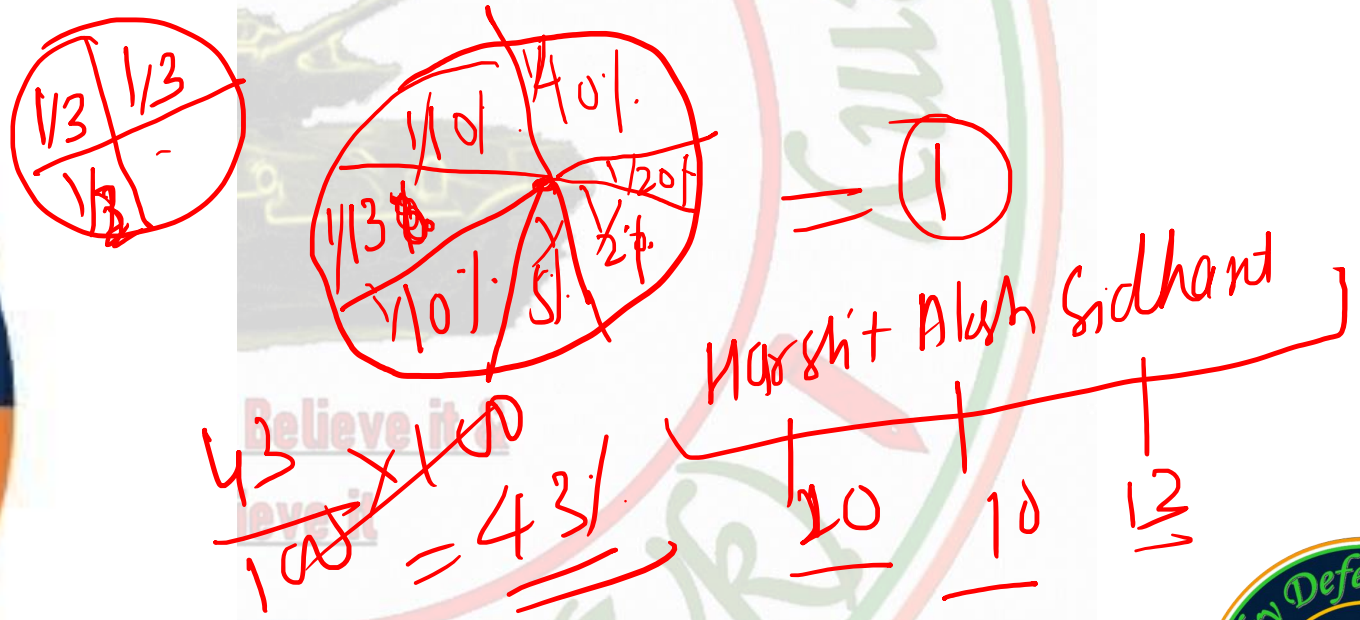
Bars (or columns) are the best types of graphs for presenting a single data series. Bar charts have a much heavier weight than line graphs do, so they really emphasize a point and stand out on the page.

PIE GRAPH

Circle graph

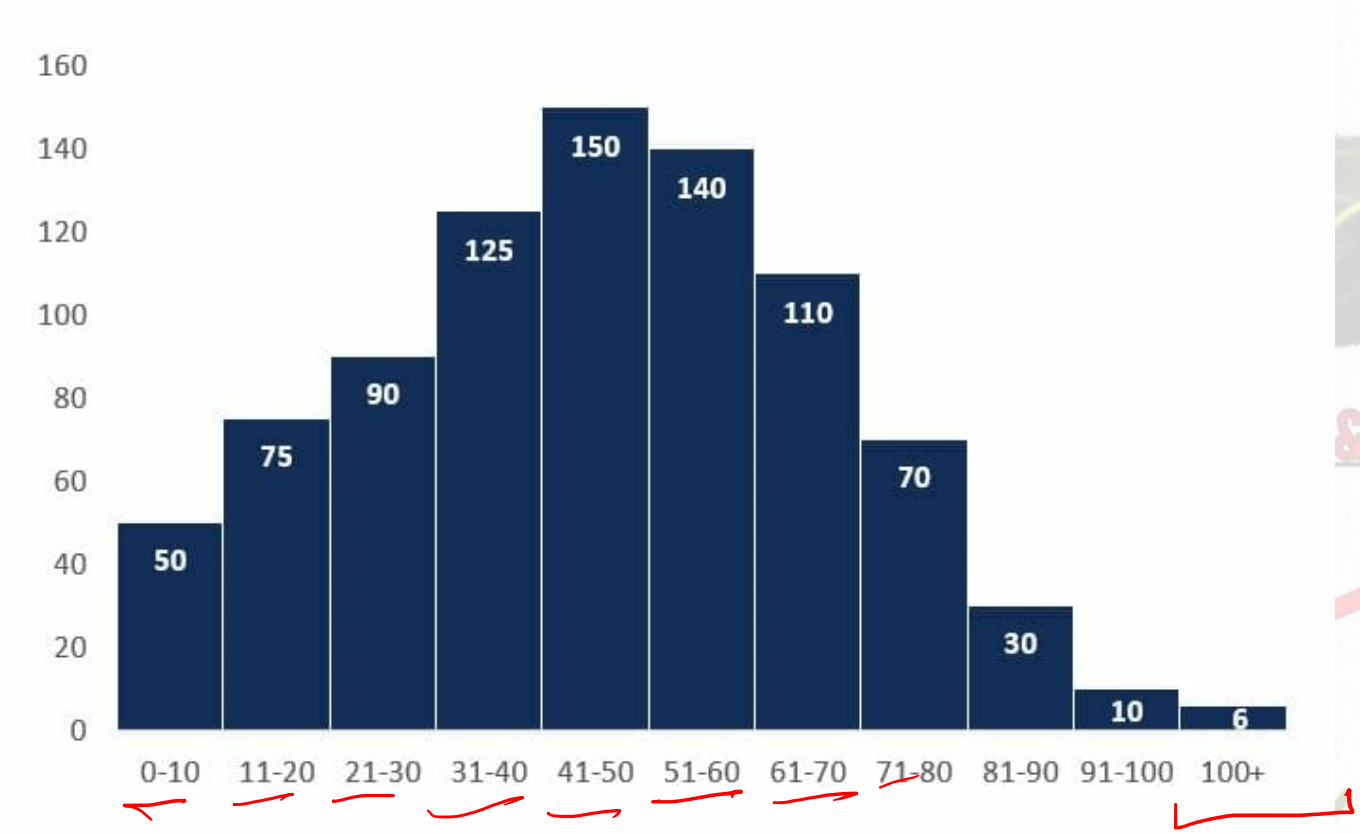
Pie charts have a bad reputation and are known for being messy and hard to read. However, if you're trying to illustrate the percentage breakdown of a small number of data points, they can be very effective. For example, the percentage of people who prefer bananas, pineapples, and grapes.





HISTOGRAM

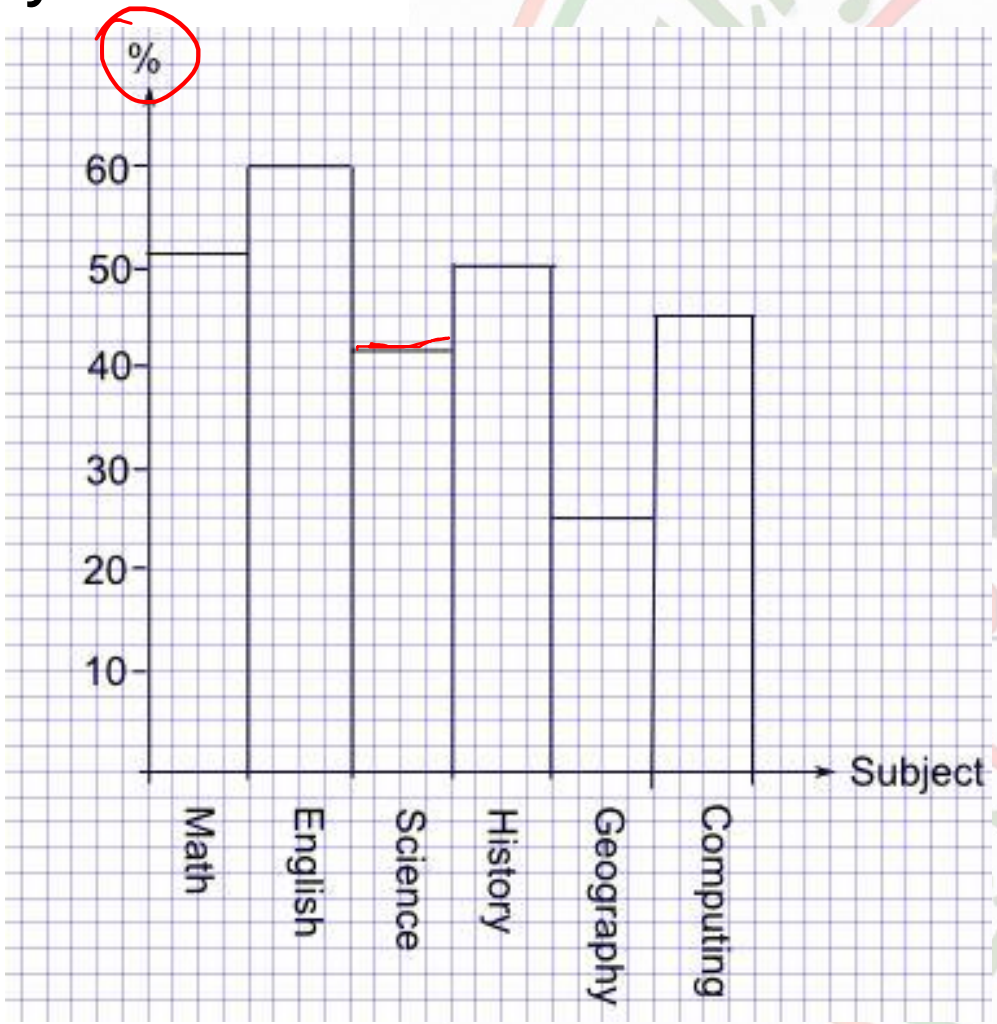
Histograms are a type of graph that shows the distribution of a dataset. They graph the percentage or the number of instances of different categories. For example, to show the distribution of age categories (0-10, 11-20, 21-30, etc.), we can clearly see which categories are the biggest and how many people fall into each.



Histogram

BAR GRAPH

Q 1. The bar graph shows the marks obtained by Sanjay in his end of year exams.



1. How many more percentage points did Sanjay score in his best subject than in his worst subject?

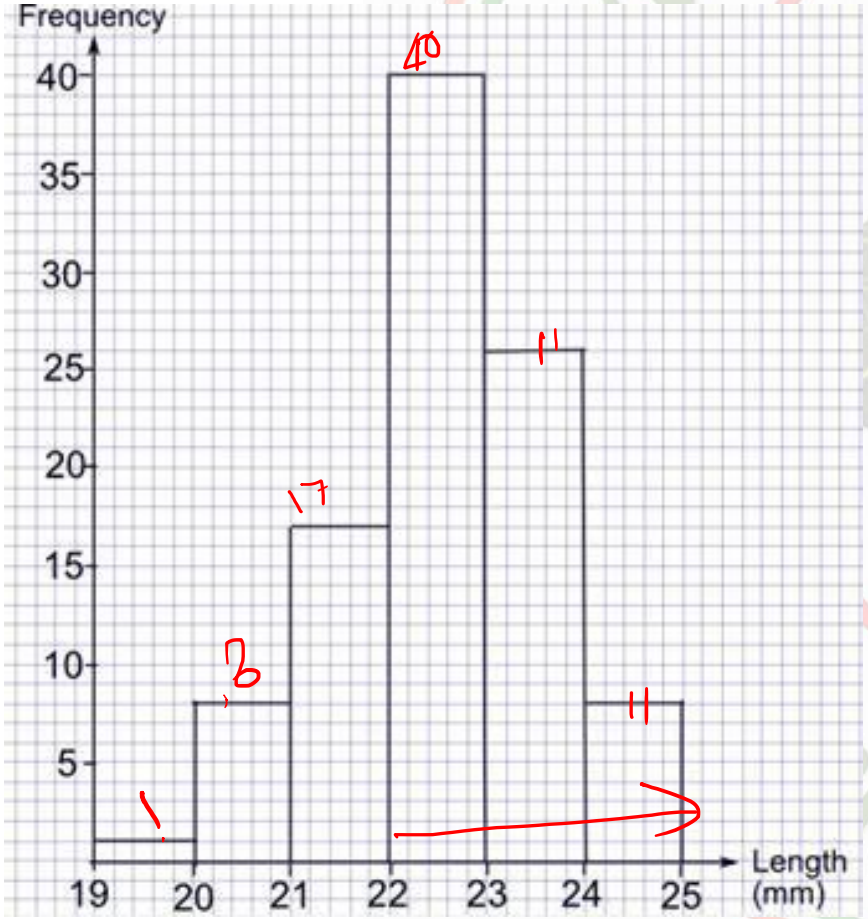
A. 35% B. 55% C. 60% D. 40%

2. Sanjay's friend, Aksh, scored 12 percentage points higher than Sanjay in Science. What was Luke's marks for Science?

A. 35% B. 55% C. 60% D. 40%

BAR GRAPH

Q 2 .A class carried out an experiment to measure the lengths of plants. The length of each plants was measured to the nearest mm. The results are shown in the following histogram. Find :-



Q 1. How many plants were measured altogether in the experiment?

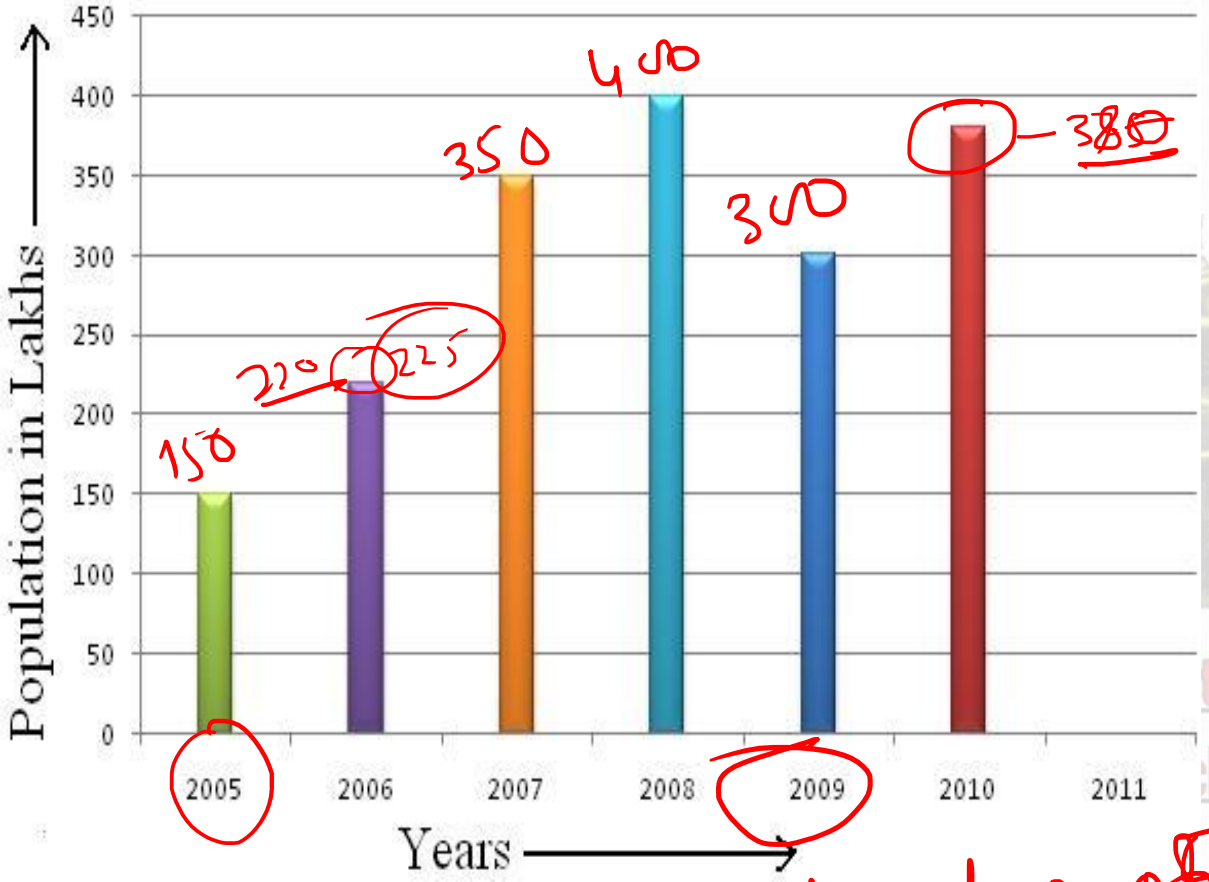
A. 90 B. 100 C. 120 D. 150

Q 2. How many eggs were less than or equal to 23 mm in length?

A. 60 B. 66 C. 72 D. 95

BAR GRAPH

Q 3. The bar graph shows the population increased per year in lakhs.



1. What percent of population in 2005 of total population from 2005 to 2010.

A. 8.33% B. 9.33% C. 10.33% D. 11.33%

2. What percentage increased from year 2007 to 2008.?

A. 8.33% B. 9.99% C. 6.66% D. 11.33%

3. What is the ratio ?

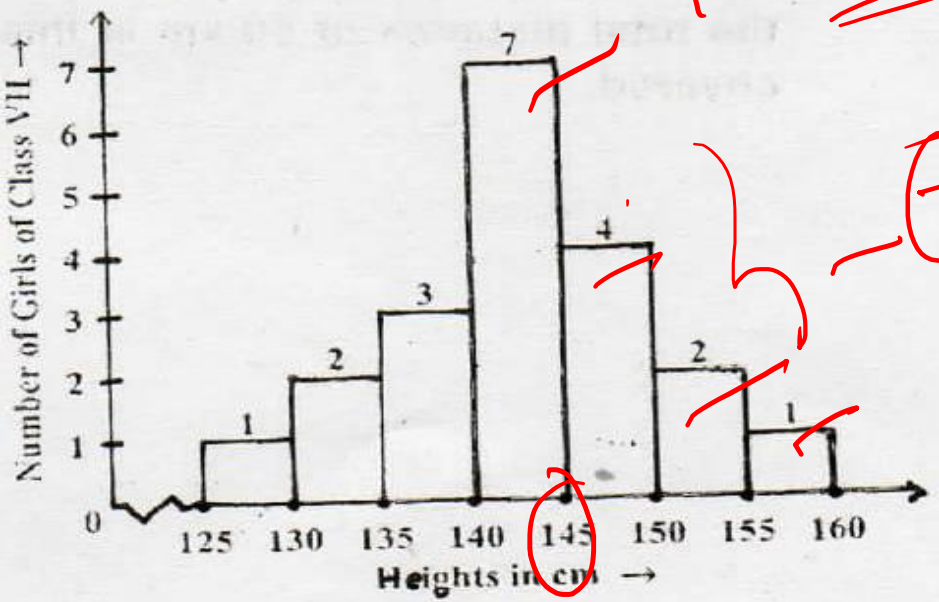
A. 60 B. 66 C. 72 D. 95

PIE CHART (CIRCLE GRAPH)

Q. 45 Observe the histogram on figure and answer the questions given below:

(i) What information is being given by the histogram ?
(ii) What group contains maximum girls.
(iii) How many girls have a length of more than 145 cm ?
(iv) If we divide the girls into the following categories, how many would there be in each ?

150 cm and more - Group A
140 to less than 150 cm - Group B
Less than 140 cm - Group C

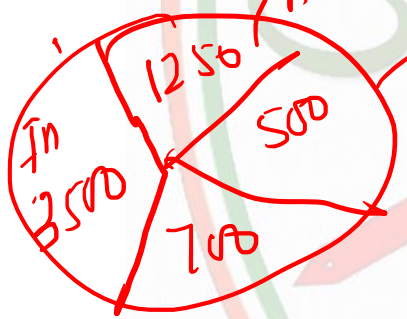


PIE CHART (CIRCLE GRAPH)

Question 3. The following pie chart depicts the percentage of students, nationwide. What is the percentage of

(i) Indian students

(ii) African Students



$\frac{3500}{5950} \times 100$

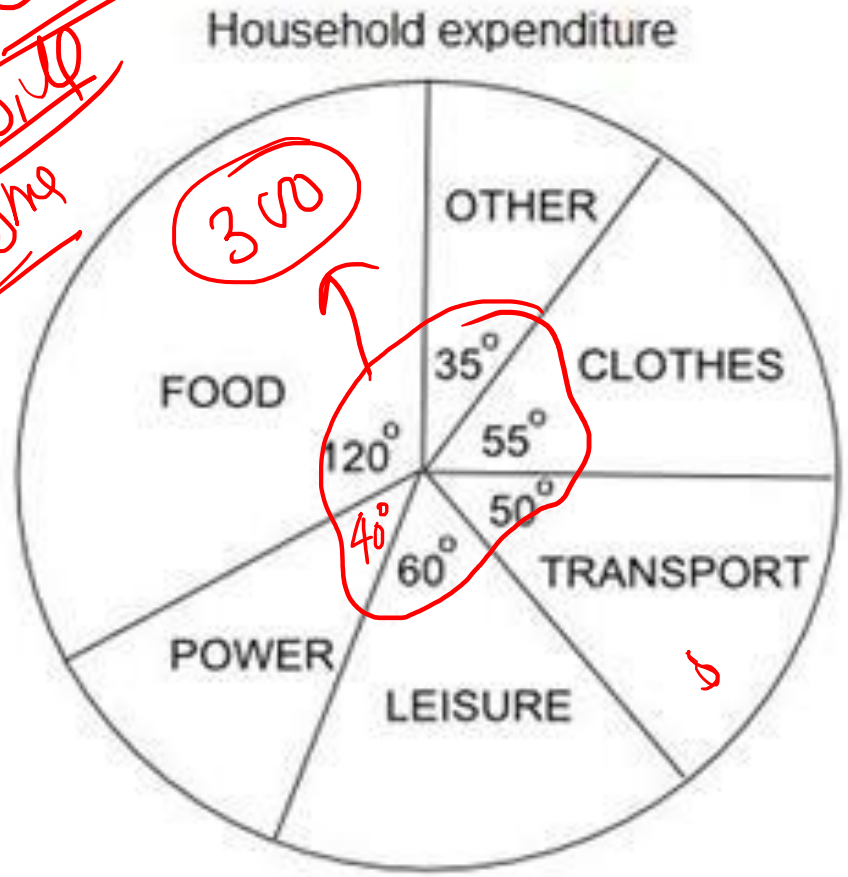
$= \frac{1250}{5950} \times 100 \Rightarrow$ %

India popula

Pie chart

PIE CHART (CIRCLE GRAPH)

Q 4. The given pie chart shows the Ankit's family's household expenditure in a month.



If the expenditure on food is Rs 300, what is the expenditure on transport?

A. Rs 125 B. Rs 100 C. Rs 120 D. Rs 150

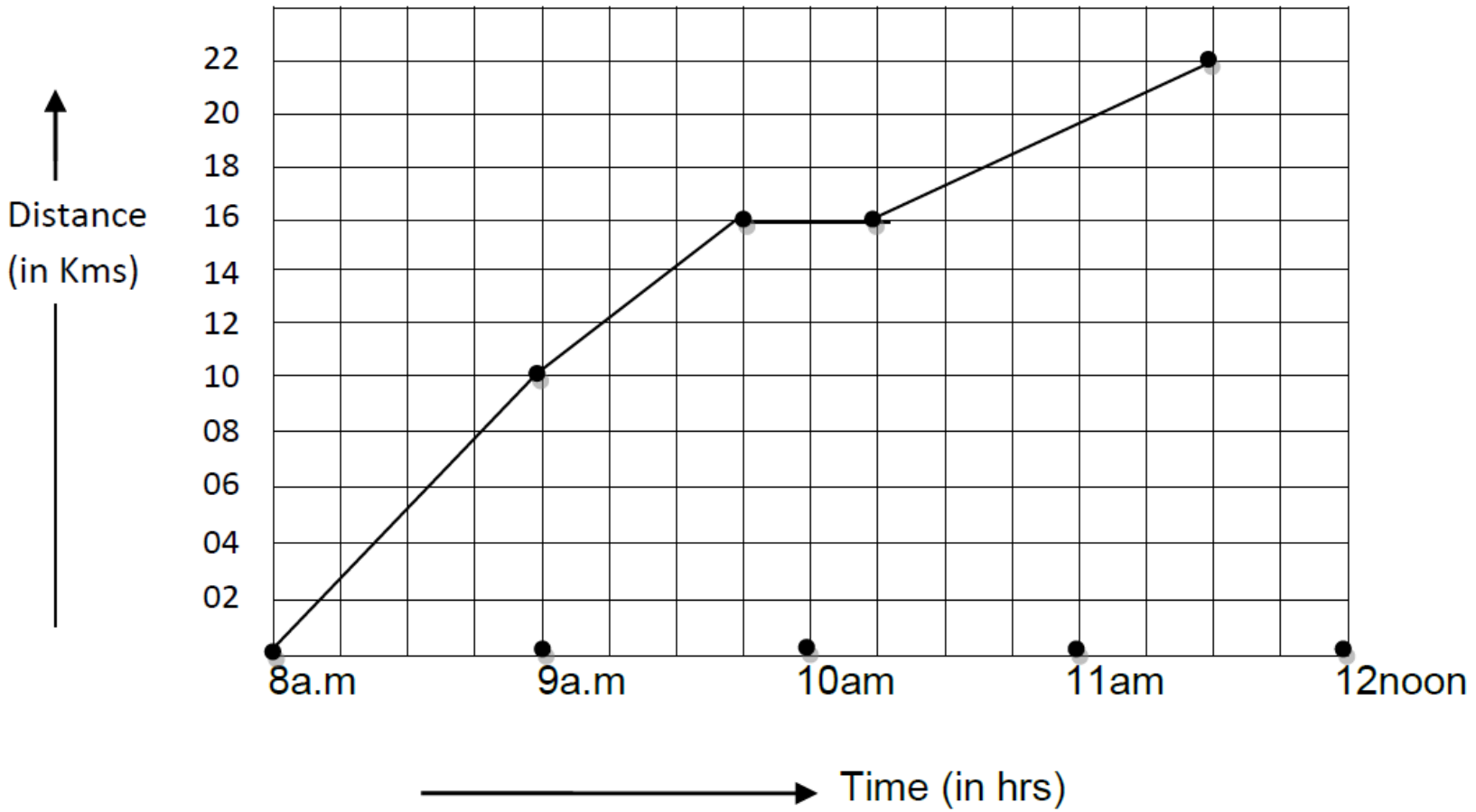
(ii) What percentage of the family's income is spent on power?

A. 10.1% B. 12.1% C. 11.1% D. 9.1%

LINE GRAPH

Q 5. Refer the following graph for Q No. 38 to 42

A courier–person cycles from a town to a neighbouring suburban area to deliver a parcel to a merchant. His distance from the town at different times is shown by the above graph?



LINE GRAPH

Q.38. What is the scale taken for the time axis?
(a).2 units =1hour (b) 1 unit =2 hours (c) 1 unit = 4 hours (d) 4 units = 1hour

Q.39. How much time did the person take for the travel?
(a)2 hours (b) 2 hours (c) 3 hours (d) 4 hours

Q.40. How far is the place of the merchant from town?
(a)11 km (b) 22 km (c) 13 km (d) 26 km

Q.41. When did the person stop on the way?
(a)between 8 am to 9 am (b) between 9 am to 10 am
(c) between 10.00 am to 10.30 am (d) between10.30 am to 11.30 am

Q.42. During which period did he ride the fastest ?
(a) between 8 am to 9 am (b) between 9 am to 10 am
(c) between 10.00 am to 10.30 am (d) between 10.30 am to 11.30 am

QUESTION SOLVE

Dream it, Believe it &
Achieve it