DAILY QUESTIONS

30th MAY '18

QUANT - AVERAGE

AVEARAGE

Q.1) The average age of a group of 20 women, of whom the youngest is 32 and the eldest is 56, is 49 years. If two women with ages 45 years and 50 years leave the group and three women join the group,
the average remains unchanged. What is the average age of the three women who joined the group later?

[a] 32 years

[b] 38 years

[c] 45 years

[d] 48 years

Solution (d)

Total age of the group= 49 x 20 = 980

After two women leave and three join, the average remains unchanged

Let total age of three women be X

[(49 x 20) - (45 + 50) + X] / 21 = 49

So, X = 144/3 = 48 years(ans.)

AVEARAGE

Q.2) Twenty four men agree with another man 'X' to provide a sum of money in charity. Each of the twenty four men contributes RS. 20. X agrees to pay RS. 3 more than twice the average of the 25 men. What is the whole sum contributed by the 25 men?

[a] RS.500

[b] RS.525

[c] RS.550

[d] RS.540

Solution (b)

24 men contribute RS. 480

Let the contribution of 'X' be RS. K

$2\{480+k/25\} + 3 = k$

$960 + 2k + 75 = 25k$

$1035 = 23k$

$1035/23 = k$

K = RS.525 (ans.)

AVEARAGE

Q.3) The average score of 60 students in an exam is 90. If the scores of the top five students are not considered, then the average of the remaining drops by 5. If the second ranker scored less then 140 and all the students got integral scores, find the minimum marks that could have been scored by the topper.

[a] 161

[b] 169

[c] 157

[d] 153

Solution (b)

The total marks of 60 students =60 x 90 = 5400

The total marks of 55 students = 55 x 85 = 4675

Total of top 5 students = 725

The second highest is <140 I.e. ≤ 139

(As the marks are integers)

If X is the top scorer, then

$725 \leq X + 139 + 139 + 139 + 139$

$725 \leq X + 556$

$X \geq 169$

So the minimum score of the topper can be 169

AVEARAGE

Q.4) In an examination of 7 subjects with maximum 100 marks in each, I scored 40% in all. Average, marks in 3 subjects were 48 while
the highest marks scored among these three subjects were 64. If passing marks in any subject were 35, then what was the minimum number of subjects in which I failed?

[a] 1

[b] 2

[c] 0

[d] none of these

Solution (a)

Total marks got = 40 x 700 / 100 = 280

Average marks in 3 subjects = 48

Total marks in these 3 subjects = 3 x 48 = 144

Out of these, I got 64 in one subject.

So, in the other 2 subjects, I must have scored 48 x 3 - 64=80

Average marks of these two subjects = 40

Hence, I passed in these three subjects

In remaining 4 subjects I got 280 - 144=136

Average marks in 4 subjects = 136 / 4= 34

For minimum number of subjects, I must have failed only in one subject and passed in the other three subjects

AVEARAGE

Q.5) The average marks scored by Suresh in 5 out of six subjects in an examinations is 54.To get an average of 60 in six subjects together, what is the score that Suresh must get in the sixth subjects?

[a] 66

[b] 65

[c] 90

[d] 84

Solution (c)

Total marks in 5 subjects=5x54=270

Total marks in 6 subjects=6x60=360

In the sixth subject 360-270=90 marks are to be scored by Suresh.

AVEARAGE

Q.6) The ratio of the number of girls to that of boys is 2:3. If the average weight of girls is 35 Kg and that of boys is 40 Kg, what is the average weight of the entire class(in kg) ?

[a] 36

[b] 37

[c] 38

[d] 39

Solution (c)

Let the number of girls be 2x, the number of boys is 3x.

So average weight of the class

=2x(35) +3x(40)/2x +3x

=70x+120x/5x

=190x/5x

=38 Kg (ans)

AVEARAGE

Q.7) The average height of a group went up by 5 cm when a person whose height was 160 cm was replaced by another person whose height was 190 cm. Find the numbers of members in the group.

[a] 6

[b] 7

[c] 8

[d] 9

Solution (a)

Difference between the height of new member and old member

=190-160

=30

Height went up by 5 cm

So number of members=30/5

6(ans)

AVEARAGE

Q.8) Four students Ajay,Bharat, Charlic and Deepak write a test, for which the maximum score is 20 marks.The average score of the four students is 12.25 marks. The average score of Ajay, Bharat and Charlic is 14 2/3 marks while the average score of Bharat,charlic and Deepak is 15. What is the average score of Bharat and Deepak?

[a] 11.5 marks

[b] 12.5 marks

[c] 12 marks

[d] can not be determined

Solution (b)

Let the marks scored by Ajay, Bharat, Charlic and Deepak be A,B,C,D respectively.

Then A+B+C+D=12.58*4=49.....(1)

A+B+C=14 2/3*3=44 .....(2)

B+C+D=15*3=45.....(3)

By subtracting the statement 2 from 1 we get D=5 marks

And statement 3 from 1 we get A=4 marks

B + C=40

As the maximum marks is 20,both B and C have to be 20 each, to have 40 marks in total.

So the average score of Bharat and Deepak

=20+5/2

=12.5 marks (ans.)

AVEARAGE

Q.9)Anoop and Bharat stood together in a weighing machine which shows the average weight of all the persons standing on it. The machine showed a reading of 70 Kgs. When Bharat stepped down and Charan stood in his place the machine showed 80 kgs. If Bharat weighed as much more then Anup as he weighed less than Charan, what would be the reading on the machine if all the three stood together on it?

[a] 40 kg

[b] 80 kg

[c]120 kg

[d] 90 kg

Solution (b)

Let the weight of Anoop, Bharat and Charan be A,B,C respectively

A+B=70*2=140.....(1)

A+C=80*2=160.....(2)

B-A=C-B

2B=A+C .....(3)

Put (3) in (2)

2B =160

B=80

A=140-B(80)

=60

C= 160-A(60)

=100

So average weight of A,B and C

(60+100+80)/3=80 kgs(ans.)

AVEARAGE

Q.10) There are 11 numbers written in increasing order. The average of the first six numbers is 40.The average of the last six numbers is 50.Find the average of the 11 numbers if the 6^{th} number is 45.

[a] 41

[b] 42

[c] 46

[d] 45

Solution (d)

Sum of first 6 numbers =6*40=240

sum of last 6 numbers =6*50=300

sum of 11 numbers= 540-45(6^{th} number)

=495

Average of the 11 numbers=495/11

45(ans.)