

1.The average marks obtained by 120 candidates in a certain examination is 35. If the average marks of passed candidate is 39 and that of the failed candidates is 15, what is the number of candidates who passed the examination

- (a)110
- (b)115
- (c)120
- (d)100
- (e)none of these

2.The average age of 8 persons in a committee is increased by 2 years when two men aged 35 years and 45 years are substituted by two women. Find the average age of these two women.

- (a)48
- (b)36
- (c)42
- (d)29
- (e)none of these

3.In a class, there are 20 boys whose average age is decreased by 2 months, when one boy aged 18 years is replaced by a new boy. Find the age of new boy.

- (a)19 years
- (b)14 years 6 month
- (c)15 years
- (d)14 years 8 month
- (e)12 years

4.One -third of certain journey is covered at the rate of 25kmph, one-fourth at the rate of 30kmph and the rest at 50 kmph. Find the average speed for the whole journey.

- (a)33.33 kmph
- (b)36
- (c)42
- (d)27
- (e)none of these

5.The average salary of the entire staff in an office is Rs 120 per month. The average salary of officers is Rs 460 and of non-officers is Rs 110. If the number of officers is 15, then find the No of non-officers in the office.

- (a)480
- (b)500
- (c)600
- (d)430
- (e)510

6.There were 35 students in a hostel. If the number of students increased by 7, the expenses of the mess increase by Rs. 42 per day, while the average expenditure per head diminishes by Rs.1. Find the original expenditure of the mess.

- (a)420
- (b)400
- (c)480
- (d)460
- (e)none of these

7.The average weight of A,B,and C is 84 kg. If D joins the group, the average weight of the group becomes 80 kg.If another man E who weights is 3 kg more than D Replaces A, Then the average of B,C,Dand E becomes 79 kg. What is the weight of A?

- (a)64
- (b)72
- (c)75
- (d)100
- (e)80

8.In an exam, the average was found to be 50 marks. After deducting computational errors the marks of the 100 candidates had to be changed from 90 to 60 each and average came down to 45 marks. Total No of candidates who took the exam were.

- (a)300
- (b)600
- (c)200
- (d)150
- (e)none of these

9. Find the average of all even No's up to 100 or average of first 50 even No's.

- (a)50
- (b)50.5
- (c)51
- (d)49
- (e)none of these

10. The average of 8 No's is 20. The average of first two No's is 15.5 and that of next three No's is $64/3$.if the 6th No be less than the seventh and eight No. by 4 and 7 respectively, then find eight No.

- (a)26
- (b)25.5
- (c)27
- (d)25
- (e)none of these

Answers with Explanation:

1. (d) Let No. of passed candidates are x

$$\text{So, } x * 39 + (120 - x) 15 = 120 * 35$$

$$x = 100$$

2.(a) Total increase = $8 * 2 = 16$ years

$$\text{So, total age of two women} = 35 + 45 + 16 = 96$$

Average age of two women = $96/2 = 48$ years

3(d) Total decrease = $20 * 2 = 40$ month

= 3 years 4 month

So, age of new boy = 18 years – 3 years 4 month

= 14 years 8 month

4.(a) Average speed = total distance / total time

LCM = 3, 4 = 12

Average speed = $12 / (1/3 * 12 * 1/25 + 1/4 * 12 * 1/30 + 5/50)$

= $12 / (4/25 + 3/30 + 5/30)$

= $150 * 12 / 54 = 33.333$ kmph

5.(e) Let no. of non-officers be x

$15 * 460 + x * 110 = (x + 15) 120$

x = 510

6.(a) Let average expenditure per head be = x

So, $(35 + 7) (x - 1) - 35x = 42$

$42(x - 1) - 35x = 42$

X = 12

Original expenditure of mess = $12 * 35 = 420$

7. $A + B + C = 3 * 84 = 252$

$A + B + C + D = 4 * 80 = 320$ ---- (i)

So, $D = 68$ & $E = 68 + 3 = 71$

$B + C + D + E = 79 * 4 = 316$ --- (ii)

From Eq. (i) & (ii)

$A - E = 320 - 316 = 4$

$A = E + 4 = 71 + 4 = 75$

8.(b) Let the total no. of candidates = x

So, $(50x - 100(90 - 60)) / x = 45$

x = 600

9.(c) 2, 4, 6, 100

Average = $(1st\ No. + Last\ No.) / 2 = (2 + 100) / 2 = 51$

10.(c) Total Sum of 8 nos. = $20 * 8 = 160$

Sum of 1st two nos. = $2 * 15.5 = 31$

Sum of next three nos. = $3 * 64/3 = 64$

Let 6th no. be x

$31 + 64 + x + (x + 4) + (x + 7) = 160$

x = 18

8th no. = $18 + 7 = 25$