Average: Answer

1. Answer: Option A
Explanation:

Required run rate = $\left(\frac{282 - (3.2 \times 10)}{40} \right) = \frac{250}{40} =$

2. Answer: Option B
Explanation:

Required average = $\left(\frac{67 \times 2 + 35 \times 2 + 6 \times 3}{2 + 2 + 3} \right)$

$= \left(\frac{134 + 70 + 18}{7} \right)$

$= \frac{222}{7}$

$= 31\frac{5}{7}$ years.

3. Answer: Option A
Explanation:

Total sale for 5 months = Rs. (6435 + 6927 + 6855 + 7230 + 6562) = Rs. 34009.

$\therefore$ Required sale = Rs. [(6500 x 6) - 34009]

= Rs. (39000 - 34009)

= Rs. 4991.

4. Answer: Option D
Explanation:

Average of 20 numbers = 0.

$\therefore$ Sum of 20 numbers (0 x 20) = 0.

It is quite possible that 19 of these numbers may be positive and if their sum is a then 20th number is ($-a$).

5. Answer: Option C
Explanation:

Total weight increased = (8 x 2.5) kg = 20 kg.

Weight of new person = (65 + 20) kg = 85 kg.

6. Answer: Option A
Explanation:
Let the average age of the whole team by x years.
$\therefore$ $11x - (26 + 29) = 9(x - 1)$

$\Rightarrow 11x - 9x = 46$
$\Rightarrow 2x = 46$
$\Rightarrow x = 23.$

So, average age of the team is 23 years.

7. Answer: Option B
Explanation:

Let P, Q and R represent their respective monthly incomes. Then, we have:

P + Q = (5050 x 2) = 10100 .... (i)

Q + R = (6250 x 2) = 12500 .... (ii)

P + R = (5200 x 2) = 10400 .... (iii)

Adding (i), (ii) and (iii), we get: 2(P + Q + R) = 33000
or P + Q + R = 16500 .... (iv)

Subtracting (ii) from (iv), we get P = 4000.

$\therefore$ P's monthly income = Rs. 4000.

8. Answer: Option B
Explanation:

Sum of the present ages of husband, wife and child = (27 x 3 + 3 x 3) years = 90 years.

Sum of the present ages of wife and child = (20 x 2 + 5 x 2) years = 50 years.

$\therefore$ Husband's present age = (90 - 50) years = 40 years.

9. Answer: Option A
Explanation:
Total quantity of petrol consumed in 3 years $= \left(\frac{4000}{7.50} + \frac{4000}{8} + \frac{4000}{8.50} \right)$ litres

$= 4000 \left(\frac{2}{15} + \frac{1}{8} + \frac{2}{17} \right)$ litres

$= \left(\frac{76700}{51} \right)$ litres

Total amount spent = Rs. (3 x 4000) = Rs. 12000.

$\therefore$ Average cost = Rs. $\left(\frac{12000 \times 51}{} \right)$ = Rs. $\frac{6120}{}$ = Rs. 7.98

76700 767

10. Answer: Option A
Explanation:

Let Arun's weight by X kg.

According to Arun, 65 < X < 72

According to Arun's brother, 60 < X < 70.

According to Arun's mother, X <= 68

The values satisfying all the above conditions are 66, 67 and 68.

$\therefore$ Required average = $\left(\frac{66 + 67 + 68}{3}\right) = \left(\frac{201}{3}\right) = 67$ kg.

11. Answer: Option D
Explanation:

Let A, B, C represent their respective weights. Then, we have:

A + B + C = (45 x 3) = 135 .... (i)

A + B = (40 x 2) = 80 .... (ii)

B + C = (43 x 2) = 86 ....(iii)

Adding (ii) and (iii), we get: A + 2B + C = 166 .... (iv)

Subtracting (i) from (iv), we get : B = 31.

$\therefore$ B's weight = 31 kg.

12. Answer: Option C
Explanation:

Required average = $\left(\frac{50.25 \times 16 + 45.15 \times 8}{16 + 8}\right)$

$= \left(\frac{804 + 361.20}{24}\right)$

$= \frac{1165.20}{24}$

= 48.55

13. Answer: Option D
Explanation:

Since the month begins with a Sunday, to there will be five Sundays in the month.

Required average = $\left(\frac{510 \times 5 + 240 \times 25}{30}\right)$

$= \frac{8550}{30}$

= 285

14. Answer: Option B
Explanation:

Required average = $\left(\frac{55 \times 50 + 60 \times 55 + 45 \times 60}{55 + 60 + 45}\right)$

$= \left(\frac{2750 + 3300 + 2700}{160}\right)$

$= \frac{8750}{160}$

= 54.68

15. Answer: Option C
Explanation:
Let there be *x* pupils in the class.

Total increase in marks = $\left(x \times \frac{1}{2}\right) = \frac{x}{2}$

$\therefore \frac{x}{2} = (83 - 63) \Rightarrow \frac{x}{2} = 20 \Rightarrow x = 40.$

16. Answer: Option D
Explanation:

P + Q + R + S = (30 x 4) $\Rightarrow$ P + Q + R + S = 120 .... (i)

I. P + R = 60 .... (ii)

II. S = (R - 10) .... (iii)

From (i), (ii) and (iii), we cannot find R.

$\therefore$ Correct answer is (D)

17. Answer: Option B
Explanation:

I. Total candidates interviewed by 3 panels = (15 x 3) = 45.

II. Let x candidates be interviewed by C.
Number of candidates interviewed by A = $(x + 2)$.
Number of candidates interviewed by B = $(x + 1)$.
$\therefore$ $x + (x + 2) + (x + 1) = 45$
$\Rightarrow$ $3x = 42$
$\Rightarrow$ $x = 14$

Hence, the correct answer is (B).

18. Answer: Option D
Explanation:
Let there be x children.
I gives, age of teacher = x years.
II gives, average age of $(x + 1)$ persons = $(x + 1)$ years.
$\therefore$ Teacher's age = $(x + 1)(x + 1) - x^2 = (x^2 + 1 + 2x) - x^2 = (1 + 2x)$

Thus, teacher's age cannot be obtained.

$\therefore$ Correct answer is (D)

19. Answer: Option E
Explanation:

I gives, total marks in 4 subjects = (60 x 4) = 240.

II gives, E + M = 170

III gives, M + S = 180.

Thus, none of (A), (B), (C), (D) is true.

$\therefore$ Correct answer is (E).

20. Answer: Option C
Explanation:

Total age of 11 players = (28 x 11) years = 308 years.

I. C = Y + 11 $\Rightarrow$ C - Y = 11 .... (i)

II. Total age of 10 players (excluding captain) = (27.3 x 10) years = 273 years.

$\therefore$ Age of captain = (308 - 273) years = 35 years.

Thus, C = 35. .... (ii)

From (i) and (ii), we get Y = 24

III. Total age of 9 players = [(25 x 3) + (28 x 3) + (30 x 3)] years = 249 years.

$\therefore$ C + Y = (308 - 249) = 59 .... (iii)

From (i) and (iii), we get C = 35.

Thus, II alone gives the answer.

Also, I and III together give the answer.

$\therefore$ Correct answer is (C).