Quiz Date: 4th August 2020

Q1. Father is aged three times more than that of his son Ronit. After 8 years, he would be two and a half times of Ronit's age. After further 8 years, how many times would he be of Ronit's age?
(a) 2 times
(b) $2\frac{1}{2}$ times
(c) $2\frac{3}{4}$ times
(d) 3 times
(e) 4 times

Q2. The batting average for 40 innings of a cricket player is 50 runs. His highest score exceeds his lowest score by 172 runs. If these two innings are excluded, the average of the remaining 38 innings is 48 runs. The highest score of the player is :
(a) 165 runs
(b) 170 runs
(c) 172 runs
(d) 174 runs
(e) 182 runs

Q3. The average age of two brothers and their father is greater than the average age of those two brothers and their mother by 3 years. The average age of the four is 19 years. If the average age of two brothers is 5 ½ years, then find the age of the father and mother.
(a) 37 years and 28 years
(b) 47 years and 38 years
(c) 50 years and 41 years
(d) 35 years and 32 years
(e) None of these

Q4. The average age of an adult class is 40 years. Twelve new students with an average age of 32 years join the class, thereby decreasing the average age of the class by 4 years. The original strength of the class was:
(a) 10
(b) 11
(c) 12
(d) 15
(e) 18

Q5. The average age of a family of six members is 22. If the present age of the youngest member is 6 years, what was the average age of the family at the time of the birth of the youngest member?
(a) 19.2 years
(b) 16.4 years

(c) 21.2 years
(d) 18.4 years
(e) 21 years

Q6. The average of sixty observations was calculated as 30. It was found later, that 45 and 46 of the observation were misread as 54 and 64 respectively. What is the correct average?
(a)26.7
(b)34.25
(c)29.55
(d)32.55
(e)28.87

Q7. In a physics class, the average age of all the members was 43.5 years. 10 members left the class and 6 new members joined. If the average age increased by 2 years and the total age decreased by 110, what was the number of members in the class initially?
(a) 34
(b) 36
(c) 32
(d) 40
(e) 30

Q8. There are 5 consecutive odd numbers. If the difference between the square of the average of first two odd numbers and the square of the average of last two odd numbers is 588, what is the smallest odd numbers?
(a) 45
(b) 47
(c) 41
(d) 49
(e) 43

Q9. The average of 6 observations is 45.5. If one new observation is added to the previous observation, then the new average becomes 47. The new observation is:
(a) 58
(b) 56
(c) 50
(d) 46

(e) 48

Q10. The average age of 40 students of a class is 15 years. When 10 new students are admitted, the average age is increased by 0.2 year. The average age of the new students is:
(a) 15.2 years
(b) 16 years
(c) 16.2 years
(d) 16.4 years
(e) 12 years

Q11. The mean weight of 120 student in the second year's class of a college is 56 kg. If the mean weight of boys and that of the girls in the class are 60 kg and 50 kg respectively, then the number of boys and girls in the class are respectively:
(a) 72,64
(b) 38,64
(c) 72,48
(d) Can't be determined
(e) None of these

Q12. The ratio of A's and B's ages is 4 : 5. If the difference between the present age of B and the age of A 5 years hence is 3 years, then what is the total of present ages of A and B?
(a) 68 years
(b) 72 years
(c) 76 years
(d) 64 years
(e) 56 years

Q13. The difference between the present ages of Arun and Deepak is 14 yr. Seven years ago, the ratio of their ages was 5 : 7 respectively. What is Deepak's present age?
(a) 56 yr
(b) 42 yr
(c) 63 yr
(d) 35 yr
(e) 45 yr

Q14. The ages of Ranjana and Rakhi are in the ratio of 15 : 17 respectively. After 6 yr the ratio of their ages will be 9 : 10. What will be the age of Ranjana after 6 yr?
(a) 40 yr
(b) 30 yr
(c) 34 yr
(d) 36 yr
(e) 38 yr

Q15. The respective ratio among the present age of Ram, Rohan and Raj is 3 : 4 : 5. If the average of their present age is 28 years then what would be the sum of the age of Ram and Rohan together after 5 years?

(a) 45 years
(b) 55 years
(c) 52 years
(d) 59 years
(e) 61 years

Solutions

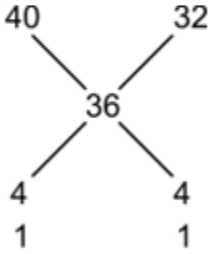
S1. Ans.(a)
Sol.
Let the age of son be x
Father's age is 3 times more than his son.
So, age of father is 4x.
$4x + 8 = 2.5(x + 8)$
$1.5x = 12 \Rightarrow x = 8$
Age of son = 8 year, father = 32 years.
So, after further 8 years
Son's age 8 + 16 = 24 Father's age
= 32 + 16 = 48
So, father is 2 times of Ronit's age.

S2. Ans.(d)
Sol.
Let the highest score be x.
Lowest score = x − 172
$x + x - 172 = 40 \times 50 - 38 \times 48$
$\Rightarrow 2x - 172 = 2000 - 1824 = 176$
$\Rightarrow 2x = 176 + 172 = 348$
$\therefore x = \frac{348}{2} = 174$

S3. Ans.(a)
Sol.

Let the ages of mother, father and boys be M, F, B_1 and B_2 respectively.
The total age of four numbers
$= 19 \times 4 = 76$ years
Given, $\frac{B_1 + B_2}{2} = \frac{11}{2}$
$\Rightarrow B_1 + B_2 = 11$
$M + F + B_1 + B_2 = 76$
$\Rightarrow M + F = 76 - 11$
$\Rightarrow M + F = 65$ .....(i)
According to the question,
$\frac{B_1 + B_2 + F}{3} = \frac{B_1 + B_2 + M}{3} + 3$
$\Rightarrow B_1 + B_2 + F = B_1 + B_2 + M + 9$
$\Rightarrow F = M + 9$
$\Rightarrow F - M = 9$
From equations (i) and (ii), we get
F = 37 years and M = 28 years

S4. Ans.(c)
Sol.
Let the original strength = x
ATQ,
$\frac{40 \times x + 12 \times 32}{x + 12} = 36$
Solving this we get $x = 12$
Required answer = 12
Alternative method,



No. of person in first and second group will be equal.
So, required answer =12

S5. Ans.(a)
Sol.

Required average age

$$= \frac{22 \times 6 - 6 \times 6}{5}$$

$$= \frac{132 - 36}{5}$$

$= 19.2$ years

S6. Ans.(c)

Sol.

Correct average

$$= \frac{60 \times 30 - (54 + 64) + 45 + 46}{60}$$

$= 29.55$

S7. Ans.(b)

Sol.

Let initially there were x students in the class.

$\therefore$ Total student's age $= 43.5x$

$$\text{ATQ}, \frac{43.5x - 110}{(x - 10 + 6)} = 45.5$$

$$\Rightarrow 43.5x - 110 = 45.5x - 182$$

$$\Rightarrow x = \frac{72}{2}$$

$$\Rightarrow x = 36$$

S8. Ans.(a)

Sol.

Let odd no. are $x, x + 2, x + 4, x + 6$ and $x + 8$

ATQ,

$$(x + 7)^2 - (x + 1)^2 = 588$$

$$\Rightarrow 6(2x + 8) = 588$$

$$\Rightarrow x + 4 = 49$$

$$\Rightarrow x = 45$$

S9. Ans.(b)

Sol.

New observation $= 47 \times 7 - 45.5 \times 6$

$= 56$

S10. Ans.(b)

Sol.

Let the average age of new students is x years

ATQ,

$$\frac{40 \times 15 + 10x}{50} = 15.2$$

$\Rightarrow 10x = 760 - 600$

$\Rightarrow x = 16$ years

S11. Ans.(c)

Sol.

Let no. of boys in the school is x

Then, no. of girls = (120 – x)

ATQ,

60x+ 50 (120 – x) = 120× 56

$\Rightarrow 10x = 720$

$\Rightarrow x = 72$

$\therefore$ No. of boys = 72

And no. of girls = 120 – 72

= 48

S12. Ans.(b)

Sol.

$$\frac{A}{B} = \frac{4}{5}$$

$\Rightarrow 5A - 4B = 0$ .....(i)

And,

B – (A + 5) = 3

Or, B – A = 8 .....(ii)

From (i) and (ii)

B = 40 years and A = 32 years

$\therefore$ Total age = 72 years.

S13. Ans.(a)

Sol.

Let the present ages of Arun and Deepak be x yr and y yr respectively.

$\therefore y - x = 14$

$x = y - 14$

and $\frac{x-7}{y-7} = \frac{5}{7}$

$7x - 49 = 5y - 35$

$\Rightarrow 7(y - 14) - 49 = 5y - 35$

$\Rightarrow 7y - 98 - 49 = 5y - 35$

$\Rightarrow 7y - 5y = 98 + 49 - 35$

$\therefore y = 56$ yr

S14. Ans.(d)

Sol.

Suppose the age of Ranjana and Rakhi is 15x yr and 17x yr.

After 6 yr the age of Ranjana and Rakhi

$\frac{15x+6}{17x+6} = \frac{9}{10}$

$\Rightarrow 153x + 54 = 150x + 60$

$\Rightarrow 153x - 150x = 60 - 54$

$3x = 6, x = 2$

So, the age of Ranjana after 6 yr

$= 15 \times 2 + 6$

$= 30 + 6 = 36$ yr

S15. Ans.(d)

Sol.

Let the present ages of Ram, Rohan and Raj be $3x$, $4x$ and $5x$ years respectively.

$\therefore 12x = 28 \times 3$

$\Rightarrow x = 7$ years

$\therefore$ Required sum = (21 + 5) + (28 + 5)

= 59 years