EXERCISE

3

AVERAGE

1. Find the average age of a family of five members, whose ages are 42, 49, 56, 63, and 35 years, respectively.

(a) 50 years   (b) 49 years
(c) 45 years   (d) 48 years

Answer: b)

$$\frac{42+49+56+63+35}{5} = \frac{245}{5} = 49$$

2. In a class of 60 students, the average height of 30 students is x cm and that of the remaining students is y cm. Find the average height of the whole class.

(a) (x+y)   (b) 30 cm
(c) $\dfrac{x+y}{2}$ (d) None of these

Answer: c)

$$= \frac{30x+30y}{60} = \frac{x+y}{2}$$

3. What is the average of the first 15 multiple of 3?

(a) 21   (b) 27
(c) 24   (d) 15

Answer: c)

$$= \frac{15}{2}[2.3+14.3] = \frac{1}{2}[6+42] = 24$$

4. The average age of 7 members of a family is 25. If one of the members, whose age is 28 years, is excluded, then others are in the ratio 1:2:3:4:5:6. Find the age of the eldest member of the family.

(a) 28   (b) 35
(c) 14   (d) 42

Answer: d)

$25 \times 7 - 28 = 21x$

$21x = 147$

$x = 7$

Age of eldest member = 6 ×7= 42years

5. The average of seven consecutive even numbers is 10. If the next three even numbers are included, then what is the new average?

(a) 10   (b) 12
(c) 13   (d) 14

Answer: c)

$7x + 42 = 70$

$7x = 28$

$x = 4$

Required average = $\dfrac{10x+90}{10} = x+9 = 13$

6. Average weight of three students is 40 kg. If the first student is twice the second and the second students is thrice the weight of the third student, then what is the weight of the student with lightest weight?

(a) 18   (b) 20
(c) 14   (d) None of these

Answer: d)

$6x + 3x + x = 120$

$10x = 120$

$X = 12$

7. In a test, the average marks of five students was found to be 50. However, during cross checking of the papers, it was discovered that the mark of one student was misread as 84 instead of 48. Find the correct average.

(a) 57.2   (b) 42.8
(c) 46.5   (d) 43.2

Answer: b)

Correct average = $\dfrac{250 - 84 + 48}{5} = \dfrac{214}{5} = 42.8$

8. The average weight of seven members of a family is 18 kg. If the head of the family is not considered, the average weight of the others would be 5 kg less. The weight of the head of the family is:

(a) 42 kg   (b) 48 kg
(c) 52 kg   (d) 36 kg

Answer: b)

Total weight of the whole family = 7 × 18 = 126

Weight of family excluding head of the family = 13 × 6 = 78 Kg.

Weight of head of the family = 48 Kg.

9. What is the average of all the odd numbers in between 50 and 80?

(a) 66   (b) 64
(c) 65   (d) 67

Answer: c)

$= \dfrac{First\ number + Last\ number}{2} = \dfrac{51 + 79}{2} = 65$

10. Saketprakash married ten years ago at the age of 27 years. His wife was 23 years old then. Six years after their marriage, the average age of Saketprakash, his wife and their son was 22 years. After how many years of Saketprakas's marriage was his son born?

(a) 6 years   (b) 3 years
(c) 2 years   (d) 4 years.

Answer: d)

After 6 years from marriage

Age of Saketprakash = 33 years

Age of his wife = 29 years

Let the age of their son be x years.

Then, $\dfrac{33 + 29 + x}{3} = 22$

62+x=66

X = 4

📝 **Notes**