Railway

Q1. What is the average (arithmetic mean) of 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

(a) 55

(b) 45

(c) 35

(d) 27.5

Q2. The arithmetic mean of the length of 100 equivalent cars is d metres. Then, which of the following is the total length (in metes) of all the cars in term of d?

(a) d + 100

(b) 100 -d

(c) $\frac{d}{100}$

(d) 100d

Q3. What is the mean of 0, 1, 0, 9, 6, 14, 0, 10, 20

(a) 8.88

(b) 6.66

(c) 2.22

(d) 4.44

Q4. Find the arithmetic mean of following:

x, x+1, x+2, x+3, x+4

(a) x +2

(b) 5x +10

(c) $\frac{2x+5}{2}$

(d) $\frac{2x+5}{3}$

Q5. Evaluate the following for given set of numbers:

3 × mean + 2 × mode – 6 median

Set={1, 2, 2, 3, 3, 3, 4, 4, 4, 4}

(a) 0

(b) 1

(c) –1

(d) 2

Q6. Find mean of first five prime nos.

(a) 5.6

(b) 3.6

(c) 5.4

(d) 4.5

Q7. Runs scored by Virat Kohli in some test Matches against Australia are as follows 101, 126, 32, 38, 52, and 40. Find median of the given scores.

(a) 48

(b) 46.5

(c) 46

(d) 47

Q8. The numbers of rupee notes of different denominations are given as below.

Denomination	10	20	5
Number of notes	15	20	8

Find mode of above data

(a) 10

(b) 8

(c) 20

(d) 15

Q9. The numbers of rupee notes of different denominations are given below.

Denomination	10	20	5
Number of notes	5	20	10

Find mean of above data

(a) $\frac{100}{7}$

(b) $\frac{400}{35}$

(c) $\frac{550}{35}$

(d) $\frac{200}{7}$

Q10. 17, x, 24, x + 4 are arranged in ascending order. The median of given data is 25. Find x

(a) 1

(b) 26

(c) 24

(d) 25

Solutions:

S1. Ans.(d)

Sol. Clearly, it's an A.P. with common difference = 5

First term = 5 & Last term = 50

So, sum = $\frac{n}{2}(a+l)$

And, mean = $\frac{\frac{n}{2}(a+l)}{n} = \frac{a+l}{2} = \frac{5+50}{2} = 27.5$

S2. Ans.(d)

Sol.

Clearly $\frac{sum\ of\ length\ of\ 100\ equivalent\ cars}{100} = d$

$\Rightarrow sum\ of\ length\ of\ 100\ equivalent\ cars = 100d$

S3. Ans.(b)

Sol.

$$mean = \frac{0+1+0+9+6+14+0+10+20}{9}$$

$$= \frac{60}{9} = 6.66$$

S4. Ans.(a)

Sol. $Mean\ of\ n\ consecutive\ numbers = \frac{n+1}{2}th\ term$ .....where n = odd

Here n = 5,

$\therefore mean = \frac{5+1}{2} = 3rd\ term$ = x+ 2

S5. Ans.(c)

Sol. As we know that mode of a given set of numbers is the observation or number which occurs most frequently.

Clearly numbers are arranged in ascending order

So, mode = 4

$$median = \frac{3+3}{2} = 3$$

$$mean = \frac{30}{10} = 3$$

So,

3 mean + 2 × mode – 6 median

= 3 × 3 + 2 × 4 – 6 × 3

= 9 + 8 – 18

= 17 – 18 = -1

S6. Ans.(a)

Sol. First five prime numbers are 2, 3, 5, 7, 11

$$mean = \frac{2+3+5+7+11}{5}$$

$$= \frac{28}{5} = 5.6$$

S7. Ans.(c)

Sol. Arranging in ascending order

32, 38, 40, 52, 101 126

Median = $\frac{1}{2}\left[\frac{n}{2} + \frac{n+2}{2}\right] th\ term$..for n = even

$$\Rightarrow Median = \frac{40+52}{2} = \frac{92}{2} = 46$$

S8. Ans.(c)

Sol. Clearly '20' is repeated twice so, mode = 20

S9. Ans.(a)

Sol. Clearly,

$\sum$ = 50 + 400 + 50

= 500

$$\therefore Mean = \frac{500}{5+20+10} = \frac{500}{35} = \frac{100}{7}$$

S10. Ans.(b)

Sol. Clearly, $25 = \frac{24+x}{2}$

$\Rightarrow$ 50 – 24 = x

$\Rightarrow$ x = 26