1. Find the mean of 53, 61, 60, 67 and 64.
Solution:

The given numbers are 53, 61, 60, 67 and 64
We know that n = 5
So Mean = (53 + 61 + 60 + 67 + 64)/ 5
By further calculation
= 305/5
= 61

2. Find the mean of first six natural numbers.
Solution:

Here the first six natural numbers are 1, 2, 3, 4, 5, 6
We know that n = 6
So Mean = (1 + 2 + 3 + 4 + 5 + 6)/ 6
By further calculation
= 21/6
= 3.5

3. Find the mean of first ten odd natural numbers.
Solution:

Here the first ten odd natural numbers are 1, 3, 5, 7, 9, 11, 13, 15, 17, 19
We know that n = 10
So Mean = (1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19)/ 10
By further calculation
= 100/10
= 10

4. Find the mean of all factors of 10.
Solution:

Here the factors of 10 are 2 and 5
We know that n = 2
So Mean = (2 + 5)/ 2
By further calculation
= 7/2
= 3.5

5. Find the mean of x + 3, x + 5, x + 7, x + 9 and x + 11.
Solution:

The given terms are x + 3, x + 5, x + 7, x + 9 and x + 11
We know that n = 5
So Mean = [(x + 3) + (x + 5) + (x + 7) + (x + 9) + (x + 11)]/ 5
By further calculation
= (5x + 35)/ 5

Taking 5 as common
= [5 (x + 7)]/ 5
= x + 7

6. If different values of variable x are 19.8, 15.4, 13.7, 11.71, 11.8, 12.6, 12.8, 18.6, 20.5 and 21.1, find the mean.
Solution:

The given values are 19.8, 15.4, 13.7, 11.71, 11.8, 12.6, 12.8, 18.6, 20.5 and 21.1
We know that n = 10
So Mean = (19.8 + 15.4 + 13.7 + 11.71 + 11.8 + 12.6 + 12.8 + 18.6 + 20.5 + 21.1)/ 10
By further calculation
= 158.01/10
= 15.801

7. The mean of a certain number of observations is 32. Find the resulting mean, if each observation is,
(i) increased by 3
(ii) decreased by 7
(iii) multiplied by 2
(iv) divided by 0.5
(v) increased by 60%
(vi) decreased by 20%
Solution:

(i) Increased by 3
Here the observed mean = 32
When increased by 3
The resulting mean = 32 + 3 = 35

(ii) Decreased by 7
Here the observed mean = 32
When decreased by 7
The resulting mean = 32 – 7 = 25

(iii) Multiplied by 2
Here the observed mean = 32
When multiplied by 2
The resulting mean = 32 × 2 = 64

(iv) Divided by 0.5
Here the observed mean = 32
When divided by 0.5
The resulting mean = 32/0.5 = 64

(v) Increased by 60%
Here the observed mean = 32
When increased by 60%
The resulting mean = 32 + 60/100
Taking LCM
= (3200 + 60)/ 100

= 3260/100
= 32.6

(vi) Decreased by 20%
Here the observed mean = 32
When decreased by 20%
The resulting mean = 32 – 20/100
Taking LCM
= (3200 – 20)/ 100
= 3180/100
= 31.8

8. The pocket expenses (per day) of Anuj, during a certain week, from monday to saturday were ₹85.40, ₹88.00, ₹86.50, ₹84.75, ₹82.60 and ₹87.25. Find the mean pocket expenses per day.
Solution:

It is given that the pocket expenses (per day) during a certain week are
₹85.40, ₹88.00, ₹86.50, ₹84.75, ₹82.60 and ₹87.25
We know that n = 6
So the mean pocket expenses per day = (85.40 + 88.00 + 86.50 + 84.75 + 82.60 + 87.25)/ 6
By further calculation
= 514.5/6
= ₹85.75

Hence, the mean pocket expenses per day are ₹85.75.

9. If the mean of 8, 10, 7, x + 2 and 6 is 9, find the value of x.
Solution:

It is given that
Mean of 8, 10, 7, x + 2 and 6 is 9
We can write it as
(8 + 10 + 7 + x + 2 + 6)/ 6 = 9
By further calculation
(x + 33)/ 6 = 9
So we get
x + 33 = 9 × 6
x = 54 – 33 = 21

10. Find the mean of first six multiples of 3.
Solution:

We know that the first six multiples of 3 are 3, 6, 9, 12, 15, 18
Here n = 6
So mean = (3 + 6 + 9 + 12 + 15 + 18)/ 6
By further calculation
= 63/ 6
= 10.5

11. Find the mean of first five prime numbers.

Solution:

Here the first five prime numbers are 2, 3, 5, 7, 11
We know that n = 5
So Mean = (2 + 3 + 5 + 7 + 11)/ 5
By further calculation
= 28/5
= 5 3/5
= 5.6

12. The mean of six numbers: x-5, x- 1, x, x + 2, x + 4 and x + 12 is 15. Find the mean of first four numbers.
Solution:

It is given that the mean of six numbers x-5, x- 1, x, x + 2, x + 4 and x + 12 is 15
So Mean = [(x − 5) + (x − 1) + x + (x + 2) + (x + 4) + (x + 12)]/ 6
By further calculation
15 = (x − 5 + x − 1 + x + x + 2 + x + 4 + x + 12)/ 6
So we get
15 = (12 + 6x)/ 6
By cross multiplication
12 + 6x = 90
6x = 90 − 12 = 78
x = 78/6 = 13

So the six numbers are (13 − 5), (13 − 1), 13, (13 + 2), (13 + 4), (13 + 12) = 8, 12, 13, 15, 17, 25
Here the mean of first four numbers = (8 + 12 + 13 + 15)/ 4 = 48/4 = 12

13. Find the mean of squares of first five whole numbers.
Solution:

Here the first five whole numbers are 0, 1, 2, 3, 4
So the square of whole numbers = 0^2, 1^2, 2^2, 3^2, 4^2 = 0, 1, 4, 9, 16
We know that n = 5
So Mean = (0 + 1 + 4 + 9 + 16)/ 5
By further calculation
= 30/5
= 6

14. If the mean of 6, 4, 7, p and 10 is 8, find the value of p.
Solution:

It is given that the mean of 6, 4, 7, p and 10 is 8
So Mean = (6 + 4 + 7 + p + 10)/ 5
By further calculation
(27 + p)/ 5 = 8
So we get
27 + p = 40
p = 40 − 27 = 13

15. Find the mean of first six multiples of 5.

Solution:

Here the first six multiples of 5 are 5, 10, 15, 20, 25 and 30
We know that n = 6
So Mean = (5 + 10 + 15 + 20 + 25 + 30)/ 6
By further calculation
= 105/6
= 17.5