

# CHAPTER 1

# INTEGERS

---

---

## Points to Remember :

- ❑ Addition is commutative for integers, *i.e.*  
 $a + b = b + a$  for all integers  $a$  and  $b$ .
- ❑ Addition is associative for integers, *i.e.*  
 $(a + b) + c = a + (b + c)$  for all integers  $a$ ,  $b$  and  $c$ .
- ❑ Multiplication is commutative for integers, *i.e.*  
 $a \times b = b \times a$  for any integers  $a$  and  $b$ .
- ❑ Multiplication is associative for integers, *i.e.*  
 $(a \times b) \times c = a \times (b \times c)$  for any three integers  $a$ ,  $b$  and  $c$ .
- ❑ Product of even number of negative integers is positive, whereas the product of odd numbers of negative integers is negative.

---

## QUESTIONS

---

### Evaluate

1.  $-32 + 47$
2. What will be the sum of  $(-2035)$  and  $285$ ?
3. What will be the sum of  $(-1006)$  and  $(-934)$ ?
4. Subtract  $(-56)$  from  $144$ .
5. Subtract the sum of  $-1878$  and  $878$  from  $2000$ .
6. Subtract  $-134$  from the sum of  $37$  and  $-87$ .
7. What is the difference between  $[36 - (-64)]$  and  $(-64) - 36$ ?
8. Simplify :  $\{-13 - (-27)\} + \{-25 - (-40)\}$
9. The sum of two integers is  $(-16)$ . If one of them is  $53$ , find the other.
10. The sum of two integers is  $65$ . If one of them is  $-35$ , find the other.

11. Multiply  $(-36)$  by  $(-50)$ .
12. Find the product of  $(-25)$  and  $(14)$ .
13. What will be the product of  $(-53)$  and  $(18)$ .
14. Find the product :  $(-2) \times 36 \times (-5)$ .
15. Find the product of  $2 \times (-27) \times 15$ .
16. Multiply :  $(-2) \times (-4) \times (-5) \times (-8)$
17. Which integer if multiplied by  $(-1)$  will be  $432$ ?
18. Find the sum of  $(8 + 9) \times 10$  and  $8 + 9 \times 10$ .
19. Find the value of  $1569 \times 887 - 569 \times 887$ .
20. Find the value of  $625 \times (-2) + (-625) \times 98$ .
21. Divide  $(-98)$  by  $(-14)$
22. Divide  $324$  by  $(-27)$ .
23. What will be the quotient if  $(-15625)$  is divided by  $(-125)$ ?
24. Simplify :  $(|-17| + |17|) \div |-2|$ .
25. Simplify :  $(-20) + (-8) \div (-2) \times 3$ .
26. Find the value of  $16 + 8 \div 4 - 2 \times 3$ .
27. Find the value of  $13 - (15 - 6 \div 3)$ .
28. Evaluate :  $(-1) \times (-2) \times (-3) \times (-4) \times (-5)$ .
29. What will be the value of  $a$  if  $a \times (-2) = (-30)$ ?
30. What will be the value of  $P$  if  $P \times (-8) = 120$ ?
31. Find the value of  $(-23) \{(-5) + (25)\}$
32. Determine the integer whose product by  $-3$  become zero.
33. Find the product of  $(-45) \times 55 \times (-10)$ .
34. What will be the quotient if  $369$  is divided by  $(-1)$ ?
35. Find the remainder if  $(-269)$  is divided by  $269$ .
36. A man drives his car at the speed of  $40$  km/hr. How long will it take to cover  $160$  km?
37. An elevator descends into a mine shaft at the rate of  $7$  m/min. If it starts from  $5$  m above the ground level. How long will it take to reach  $205$  m down the earth?
38. A diver dives in the sea  $270$  m down. If the speed of diver is  $3$ m/sec. How long will he take?
39. At Srinagar, temperature was  $-7^{\circ}\text{C}$  on Tuesday and then it dropped by  $2^{\circ}\text{C}$  on Wednesday. What was the temperature of Srinagar on Wednesday?

40. If the sum of two integers is  $-1600$  and one of them is  $549$ , find the other number.
41. In a class test containing 10 questions, 5 marks are awarded for every correct answer and  $(-2)$  marks are awarded for every incorrect answer. Mohan gets 4 correct and 6 incorrect answers. What is his score?
42. The temperature at 1.00 p.m. was  $10^{\circ}\text{C}$  above zero. If it decreases at the rate of  $2^{\circ}\text{C}$  per hour until 10 p.m., at what time would the temperature be  $6^{\circ}\text{C}$  below zero?
43. An elevator descends into a mine shaft at the rate of 6 meter per minute. If the descent starts from the ground level, how long will it take to reach 240 meter?
44. The product of two integers is  $-51$ . If one integer is  $-17$ , find the other.
45. Product of two integers is 630. If one integer is  $-30$ , find the other.
46. Rohit earns profit of Re. 1 by selling one pen and suffers a loss of 50 paise by selling one pencil. One day Rohit earns Rs. 5. If he sold 25 pens, how many pencils did he sell?
47. Determine the integer whose product with  $(-7)$  is 154.
48. Determine the integer when it is divided by  $(-9)$ , the answer is 23.
49. Determine the integer when it is divided by  $(-17)$ , the answer is 21.
50. Determine the integer whose product with  $(-13)$  is  $-325$ .

---

## ANSWERS

---

- |            |              |
|------------|--------------|
| 1. 15      | 2. $-1750$   |
| 3. $-1940$ | 4. 200       |
| 5. 3000    | 6. 84        |
| 7. 200     | 8. 29        |
| 9. $-69$   | 10. 100      |
| 11. 1800   | 12. $-350$   |
| 13. $-954$ | 14. 360      |
| 15. $-810$ | 16. 320      |
| 17. $-432$ | 18. 268      |
| 19. 887000 | 20. $-62500$ |
| 21. 7      | 22. $-12$    |
| 23. 125    | 24. 17       |
| 25. $-8$   | 26. 12       |
| 27. 0      | 28. $-120$   |

- |     |            |     |            |
|-----|------------|-----|------------|
| 29. | 15         | 30. | -15        |
| 31. | -460       | 32. | 0          |
| 33. | 24750      | 34. | -369       |
| 35. | 0          | 36. | 4 hours    |
| 37. | 30 min.    | 38. | 90 sec.    |
| 39. | -9°C.      | 40. | -2149      |
| 41. | 8          | 42. | 9 p.m.     |
| 43. | 40 minutes | 44. | 3          |
| 45. | -21        | 46. | 40 pencils |
| 47. | -22        | 48. | -207       |
| 49. | -357       | 50. | 25         |
-