

8. Arrange in ascending order:

(a) $55 - 26$ (b) $60 - 32$ (c) 18×2 (d) 3×14 (e) $99 \div 3$

(A) (b), (a), (e), (c), (d)

(B) (a), (b), (d), (e), (c)

(C) (e), (b), (a), (d), (c)

(D) (e), (a), (b), (d), (c)

Ans. (A) (b), (a), (e), (c), (d)

(a) $55 - 26 = 29$

(b) $60 - 32 = 28$

(c) $18 \times 2 = 36$

(d) $3 \times 14 = 42$

(e) $99 \div 3 = 33$

28 (b), 29 (a), 33 (e), 36 (c), 42 (d)

So the correct order is: **(b), (a), (e), (c), (d)**

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

9. **Assertion (A):** $7 + 3 \times 5 = 50$

Reason (R): Multiplication is performed before addition.

Ans. (d) Assertion (A) is false but reason (R) is true.

10. **Assertion (A):** In $14 + 20 \div 5$, division is done before addition.

Reason (R): Division and multiplication have higher precedence than addition and subtraction.

Ans. (a) Both Assertion (A) and Reason (R) are true and reason (R) is the correct explanation of assertion (A).

SECTION – B

Questions 11 to 14 carry 2 marks each.

11. (a) Evaluate: $(90 \div 9) + 8 \times (6 - 3)$

(b) Find the value: $(20 \times 5) - (80 \div 8) + 15$

Ans. (a) $(90 \div 9) + 8 \times (6 - 3)$

$= 10 + 8 \times 3 = 10 + 24 = 34$

(b) $(20 \times 5) - (80 \div 8) + 15 = 100 - 10 + 15 = 105$

12. Arrange in increasing order:

$42 \div 7, 6 \times 8, 75 - 60, 13 + 17, 3^3 + 2$

Ans. $42 \div 7 = 6$

$6 \times 8 = 48$

$75 - 60 = 15$

$13 + 17 = 30$

$3^3 + 2 = 27 + 2 = 29$

Order: 6, 15, 29, 30, 48

13. Simplify: $18^2 \div (9 \times 6) + 25 - 10$

Ans. $18^2 \div (9 \times 6) + 25 - 10$

$= 324 \div 54 + 15 = 6 + 15 = 21$

14. The sum of 85 and 39 is multiplied by 4, and then 96 is added.

Write the expression and evaluate.

Ans: Expression = $(85 + 39) \times 4 + 96$
 $= 124 \times 4 + 96$
 $= 496 + 96 = 592$

SECTION – C

Questions 15 to 17 carry 3 marks each.

- 15.** A shopkeeper sells 8 kg of rice at ₹55 per kg and 6 kg of sugar at ₹42 per kg. Write an expression for the total amount and find its value.

Ans: Expression = $(8 \times 55) + (6 \times 42)$
 $= 440 + 252$
 $= ₹692$

- 16.** Evaluate: $1000 - [(84 - 36) \div 4 + 9 \times (15 - 8)]$

Ans: Simplify inside round brackets: $84 - 36 = 48$, $15 - 8 = 7$
 Inside square bracket: $48 \div 4 = 12$, $9 \times 7 = 63$, $12 + 63 = 75$
 Subtract from 1000: $1000 - 75 = 925$

- 17.** A basket contains 12 apples costing ₹15 each, 8 oranges costing ₹12 each, and 6 mangoes costing ₹25 each. Write an expression for total cost and find it.

Ans: Expression: $(12 \times 15) + (8 \times 12) + (6 \times 25)$
 Apples: $12 \times 15 = 180$
 Oranges: $8 \times 12 = 96$
 Mangoes: $6 \times 25 = 150$
 Total = $180 + 96 + 150 = 426$

SECTION – D

Questions 18 carry 5 marks.

- 18.** A group of 15 friends is going for a picnic. They decide to buy:

Sandwiches: 2 each at ₹45 each

Juice boxes: 1 each at ₹30

Chips packets: 3 for every 2 people, at ₹25 each packet.

(a) Write the expression for total cost.

(b) Calculate the total amount.

(c) If each friend contributes equally, how much will each person pay?

Ans:

Sandwiches cost = $15 \times 2 \times 45 = ₹1350$

Juice cost = $15 \times 30 = ₹450$

Number of chips packets = $(15 \times 3) / 2 = 22.5 \rightarrow$ **23 packets** (since we cannot buy half)

Chips cost = $23 \times 25 = ₹575$

Total cost = $₹1350 + ₹450 + ₹575 = ₹2375$

Contribution per person = $₹2375 \div 15 = ₹158.33$

SECTION – E (Case Study Based Questions)

Questions 19 to 20 carry 4 marks each.

- 19.** Sita is preparing for her school's annual function and has been assigned the responsibility of arranging return gifts for the guests. She decides to purchase 15 boxes of chocolates priced at ₹90 each, 20 fresh flower bouquets costing ₹120 each, and 25 beautifully designed greeting cards at ₹15 each. While placing her order through an online store, she notices an offer: a flat 12% discount on the total bill if the payment is made online. Excited to save money for the school, Sita calculates the total cost of the items, applies the discount, and prepares the payment accordingly.



- (a) Write the expression to calculate amount after discount and find amount payable.
 (b) If Sita orders 5 extra bouquets and price per bouquet increases by ₹25, calculate new payable amount after discount.

Ans. (a) Total before discount = $15 \times 90 + 20 \times 120 + 25 \times 15 = 1350 + 2400 + 375 = ₹4125$

Discount = $12\% \times 4125 = 0.12 \times 4125 = ₹495$

After discount, Total cost = $4125 - 495 = ₹3630$

(b) New bouquet quantity = $20 + 5 = 25$

New bouquet price = $120 + 25 = ₹145$

New bouquet cost = $25 \times 145 = 3625$

New total before discount = $1350 + 3625 + 375 = 5350$

Discount = $12\% \times 5350 = 0.12 \times 5350 = ₹642$

After discount, Total = $5350 - 642 = ₹4708$

20. Arjun is organizing a weekend picnic for his friends and has taken charge of purchasing the snacks and refreshments. He decides to buy 6 packets of freshly made sandwiches priced at ₹50 each, 8 bottles of chilled juice costing ₹30 each, and 12 packets of crispy chips priced at ₹20 each. He visits a nearby store that offers a special flat discount of ₹100 on the total bill, regardless of the purchase amount. Happy to save some money, Arjun calculates the total cost of all the items, subtracts the discount, and prepares the final payment for the shopkeeper.



- (a) Write the arithmetic expression for the total cost after discount and calculate amount to pay.
 (b) If Arjun buys 3 more packets of chips and the price per chip packet increases by 10%, find new total after discount.

Ans. (a) Total cost before discount = $6 \times 50 + 8 \times 30 + 12 \times 20 = 300 + 240 + 240 = ₹780$

After discount: Total cost = $780 - 100 = ₹680$

(b) New chip price = $20 + 10\% \times 20 = 20 + 2 = ₹22$

New quantity: $12 + 3 = 15$

New chip cost = $15 \times 22 = 330$

New total before discount = $300 + 240 + 330 = 870$

After discount = $870 - 100 = ₹770$