

### Question 5:

Find the product, using suitable properties:

(a)  $26 \times (-48) + (-48) \times (-36)$

(c)  $15 \times (-25) \times (-4) \times (-10)$

(e)  $625 \times (-35) + (-625) \times 65$

(g)  $(-17) \times (-29)$

(b)  $8 \times 53 \times (-125)$

(d)  $(-41) \times (102)$

(f)  $7 \times (50 - 2)$

(h)  $(-57) \times (-19) + 57$



**Answer 5:**

(a)  $26 \times (-48) + (-48) \times (-36)$

$\Rightarrow (-48) \times [26 + (-36)]$

[Distributive property]

$\Rightarrow (-48) \times (-10)$

$\Rightarrow 480$

(b)  $8 \times 53 \times (-125)$

$\Rightarrow 53 \times [8 \times (-125)]$

[Commutative property]

$\Rightarrow 53 \times (-1000)$

$\Rightarrow -53000$

(c)  $15 \times (-25) \times (-4) \times (-10)$

$\Rightarrow 15 \times [(-25) \times (-4) \times (-10)]$

[Commutative property]

$\Rightarrow 15 \times (-1000)$

$\Rightarrow -15000$

(d)  $(-41) \times (102)$

$\Rightarrow -41 \times [100 + 2]$

[Distributive property]

$\Rightarrow [(-41) \times 100] + [(-41) \times 2]$

$\Rightarrow -4100 + (-82)$

$\Rightarrow -4182$

(e)  $625 \times (-35) + (-625) \times 65$

$\Rightarrow 625 \times [(-35) + (-65)]$

[Distributive property]

$\Rightarrow 625 \times (-100)$

$\Rightarrow -62500$

(c)  $7 \times (50 - 2)$

$\Rightarrow 7 \times 50 - 7 \times 2$

[Distributive property]

$\Rightarrow 350 - 14 = 336$

$$(g) (-17) \times (-29)$$

$$\Rightarrow (-17) \times [(-30) + 1]$$

[Distributive property]

$$\Rightarrow (-17) \times (30) + (-17) \times 1$$

$$\Rightarrow 510 + (-17)$$

$$\Rightarrow 493$$

$$(e) (-57) \times (-19) + 57$$

$$\Rightarrow (-57) \times (-19) + 57 \times 1$$

$$\Rightarrow 57 \times 19 + 57 \times 1$$

$$\Rightarrow 57 \times (19 + 1)$$

[Distributive property]

$$\Rightarrow 57 \times 20 = 1140$$

### Question 6:

A certain freezing process requires that room temperature be lowered from  $40^{\circ}\text{C}$  at the rate of  $5^{\circ}\text{C}$  every hour. What will be the room temperature 10 hours after the process begins?

#### Answer 6:

Given: Present room temperature =  $40^{\circ}\text{C}$

Decreasing the temperature every hour =  $5^{\circ}\text{C}$

Room temperature after 10 hours =  $40^{\circ}\text{C} + 10 \times (-5^{\circ}\text{C})$

=  $40^{\circ}\text{C} - 50^{\circ}\text{C}$

=  $-10^{\circ}\text{C}$

Thus, the room temperature after 10 hours is  $-10^{\circ}\text{C}$  after the process begins.

### Question 7:

In a class test containing 10 questions, 5 marks are awarded for every correct answer and  $(-2)$  marks are awarded for every incorrect answer and 0 for questions not attempted.

- Mohan gets four correct and six incorrect answers. What is his score?
- Reshma gets five correct answers and five incorrect answers, what is her score?
- Heena gets two correct and five incorrect answers out of seven questions she attempts. What is her score?



### Answer 7:

- (i) Mohan gets marks for four correct questions =  $4 \times 5 = 20$   
He gets marks for six incorrect questions =  $6 \times (-2) = -12$   
Therefore, total scores of Mohan =  $(4 \times 5) + [6 \times (-2)]$   
=  $20 - 12 = 8$   
Thus, Mohan gets 8 marks in a class test.
- (ii) Reshma gets marks for five correct questions =  $5 \times 5 = 25$   
She gets marks for five incorrect questions =  $5 \times (-2) = -10$   
Therefore, total score of Resham =  $25 + (-10) = 15$   
Thus, Reshma gets 15 marks in a class test.
- (iii) Heena gets marks for two correct questions =  $2 \times 5 = 10$   
She gets marks for five incorrect questions =  $5 \times (-2) = -10$   
Therefore, total score of Heena =  $10 + (-10) = 0$   
Thus, Heena gets 0 marks in a class test.