



## Class 9 Maths – Chapter 3



### Exercise Set 3.2 – The World of Numbers

Here are the **exact questions** from the new **Ganita Manjari Grade 9 Part I textbook**, with simple step-by-step solutions.

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#### Q1. Temperature in Ladakh

The temperature at noon is **4°C**. By midnight, it drops by **15°C**. What is the midnight temperature?



Solution:

Midnight temperature  
=  $4 - 15$   
= **-11°C**



**Answer: -11°C**

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#### Q2. Spice Trader

A spice trader takes a **loan (debt) of ₹850**. The next day, he makes a **profit of ₹1,200**. The following week, he incurs a **loss of ₹450**.

Write the sequence as an equation using integers and find his final financial standing.



Solution:

Loan = **-₹850**  
Profit = **+₹1,200**  
Loss = **-₹450**

Therefore:

**-850 + 1200 - 450**  
**= 350 - 450**

$$= -100$$

A negative balance means a debt of ₹100.

✓ Answer: -₹100, i.e. a debt of ₹100

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### Q3. Calculate using Brahmagupta's Laws

(i)  $(-12) \times 5$

Negative  $\times$  Positive = Negative

$$12 \times 5 = 60$$

✓ Answer: -60

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(ii)  $(-8) \times (-7)$

Negative  $\times$  Negative = Positive

$$8 \times 7 = 56$$

✓ Answer: 56

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(iii)  $0 - (-14)$

Subtracting a negative is equivalent to adding a positive:

$$0 - (-14)$$

$$= 0 + 14$$

$$= 14$$

✓ Answer: 14

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(iv)  $(-20) \div 4$

Negative  $\div$  Positive = Negative

$$20 \div 4 = 5$$

✓ Answer: -5

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 **Q4. Why is subtracting a negative the same as adding a positive?** 

Consider a debt of ₹5.

Suppose you have:

$$₹10 - (-₹5)$$

Here, -₹5 represents a debt of ₹5.

Subtracting the debt means **removing the debt**.

So:

$$\begin{aligned} 10 - (-5) \\ = 10 + 5 \\ = 15 \end{aligned}$$

✓ **Answer:** Subtracting a negative number means removing a debt, which increases your financial position by the same amount. Therefore:

$$a - (-b) = a + b$$

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## QUICK ANSWER KEY

| Question | Answer            |
|----------|-------------------|
| 1        | -11°C             |
| 2        | -₹100 (₹100 debt) |
| 3(i)     | -60               |
| 3(ii)    | 56                |
| 3(iii)   | 14                |
| 3(iv)    | -5                |

4 Subtracting a negative = adding a positive

 **Textbook reference:** Exercise Set 3.2 is on **page 46** of the Ganita Manjari Grade 9 Part I PDF.