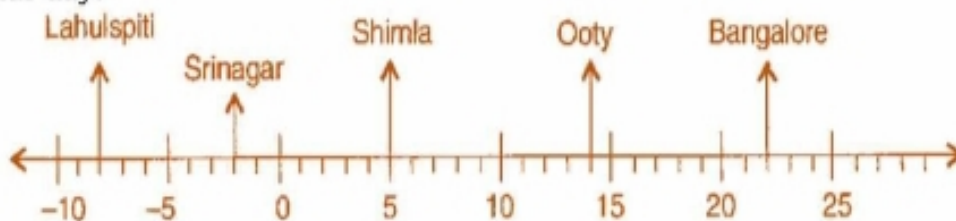


Exercise 1.1

Question 1:

Following number line shows the temperature in degree Celsius ($^{\circ}\text{C}$) at different places on a particular day:



- Observe this number line and write the temperature of the places marked on it.
- What is the temperature difference between the hottest and the coldest places among the above?
- What is the temperature difference between Lahulspiti and Srinagar?
- Can we say temperature of Srinagar and Shimla taken together is less than the temperature at Shimla? Is it also less than the temperature at Srinagar?

Answer 1:

- (a) The temperature of the places marked on it is:

Places	Temperature	Places	Temperature
Bangalore	22°C	Srinagar	-2°C
Ooty	14°C	Lahulspiti	-8°C
Shimla	5°C		

- (b) The temperature of the hottest place Bangalore = 22°C
The temperature of the coldest place Lahulspiti = -8°C
Difference = $22^{\circ}\text{C} - (-8^{\circ}\text{C}) = 22^{\circ}\text{C} + 8^{\circ}\text{C} = 30^{\circ}\text{C}$
- (c) The temperature of Srinagar = -2°C
The temperature of Lahulspiti = -8°C
Difference = $-2^{\circ}\text{C} + (-8^{\circ}\text{C}) = -2^{\circ}\text{C} - 8^{\circ}\text{C} = 6^{\circ}\text{C}$
- (d) The temperature of Srinagar and Shimla = $5^{\circ}\text{C} + (-2^{\circ}\text{C}) = 5^{\circ}\text{C} - 2^{\circ}\text{C} = 3^{\circ}\text{C}$
The temperature at Shimla = 5°C
Therefore, $3^{\circ}\text{C} < 5^{\circ}\text{C}$
Thus, temperature of Srinagar and Shimla taken together is less than the temperature at Shimla.
Now, Temperature of Srinagar = -2°C
Therefore, $3^{\circ}\text{C} > -2^{\circ}\text{C}$
No, it is not less than the temperature at Srinagar.

Question 2:

In a quiz, positive marks are given for correct answers and negative marks are given for incorrect answers. If Jack's scores in five successive rounds were 25, -5, -10, 15 and 10, what was his total at the end?

Answer 2:

Jack's scores in five successive rounds are 25, -5, -10, 15 and 10.

$$\begin{aligned}\text{Total marks got by Jack} &= 25 + (-5) + (-10) + 15 + 10 \\ &= 25 - 15 + 25 = 35\end{aligned}$$

Thus, 35 marks are got by Jack in a quiz.

Question 3:

At Srinagar temperature was -5°C on Monday and then it dropped by 2°C on Tuesday. What was the temperature of Srinagar on Tuesday? On Wednesday, it rose by 4°C . What was the temperature on this day?

Answer 3:

On Monday, temperature at Srinagar = -5°C

On Tuesday, temperature dropped = 2°C

$$\therefore \text{Temperature on Tuesday} = -5^{\circ}\text{C} - 2^{\circ}\text{C} = -7^{\circ}\text{C}$$

On Wednesday, temperature rose up = 4°C

$$\therefore \text{Temperature on Wednesday} = -7^{\circ}\text{C} + 4^{\circ}\text{C} = -3^{\circ}\text{C}$$

Thus, temperature on Tuesday and Wednesday was -7°C and -3°C respectively.

Question 4:

A plane is flying at the height of 5000 m above the sea level. At a particular point, it is exactly above a submarine floating 1200 m below the sea level. What is the vertical distance between them?

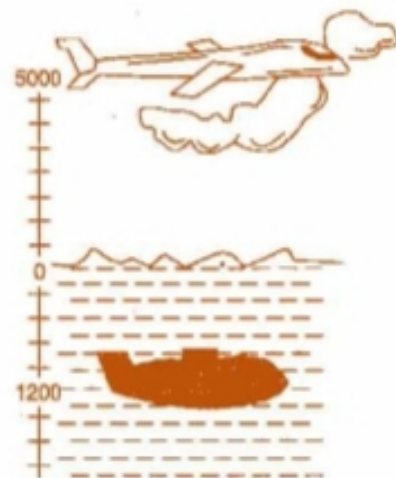
Answer 4:

Height of a plane above the sea level = 5000 m

Floating a submarine below the sea level = 1200 m

$$\therefore \text{The vertical distance between the plane and the submarine} = 5000 + 1200 = 6200 \text{ m}$$

Thus, the vertical distance between the plane and the submarine is 6200 m.

**Question 5:**

Mohan deposits ₹2,000 in his bank account and withdraws ₹1,642 from it, the next day. If withdrawal of amount from the account is represented by a negative integer, then how will you represent the amount deposited? Find the balance in Mohan's accounts after the withdrawal?

Answer 5:

Deposit amount = ₹2,000 and Withdrawal amount = ₹1,642

$$\therefore \text{Balance} = 2,000 - 1,642 = ₹358$$

Thus, the balance in Mohan's account after withdrawal is ₹ 358.

Question 6:

Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positive integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?

Answer 6:

According to the number line, Rita moves towards east is represented by a positive integer. But she moves in opposite direction means Rita moves west, is represented by negative integer.