

Subject: Mathematics

Class: 7

Topic: Real-life problems involving integers

Levels: Basic, Intermediate, Advanced

Level: Basic

1. Aarav deposits ₹500 in his bank account and withdraws ₹200. What is his net balance? (Use + and -)
2. The temperature in Leh was 5°C in the morning and dropped by 8°C at night. What is the night temperature?
3. A submarine is 300 m below sea level (₹ -300). If it ascends 100 m, what is its new position?
4. In a quiz, Priya gets +5 for correct answers and -2 for wrong ones. She got one of each. Total score? ?
5. An elevator starts at the Ground Floor (0). It goes up 4 floors and then down 6 floors. Which floor is it on?
6. Rahul owes his friend ₹50 (₹ -50). He pays back ₹30 (₹ +30). How much does he still owe? ?
7. A bird is flying at 25 m above sea level. A fish is 5 m below sea level. What is the vertical distance?
8. Simplify the temperature change: A room at 32°C is cooled by 10°C . New temperature? ?
9. Write the integer representing: 'A profit of ₹150 followed by a loss of ₹200'.
10. A kite rises 20 m (?) and then falls 20 m (?). What is its change in height from the start?

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1. In a test, +4 marks are given for correct answers and -1 for incorrect. Arjun got 7 correct and 3 wrong. Total? ?
2. The freezing point of a liquid is -15°C . If the room temperature is 25°C , what is the difference? ?
3. A shopkeeper earns a profit of ₹8 on a pen but a loss of ₹3 on a pencil. He sells 10 of each. Net profit/loss?
4. A diver jumps from a board 3 m above water into a pool 4 m deep. Total vertical distance traveled? ?
5. At 12 noon, the temperature was 10°C above zero. It decreases at 2°C per hour. What is it at 6 PM?
6. An airplane is at 5000 m. It descends 1200 m and then ascends 800 m. Final altitude? ?
7. Riya's bank balance was -₹450 (overdraft). She deposits ₹1000. What is her new balance? ?
8. A caterpillar climbs up a 10 m wall. It climbs 3 m during the day and slips 2 m at night. Net gain in 1 day?
9. Find the product of $(-12) \times (-5)$ and explain if the result is a profit or loss in a business context.
10. If 'a' represents steps climbed (positive) and 'b' represents steps descended (negative), find: $15 + (-20) + 5$.

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1. A drilling machine bores 2 m per minute. How long will it take to reach -50 m starting from +10 m? ?
2. A certain freezing process requires room temperature be lowered from 40°C at 5°C/hr . Temp after 10 hours?
3. In a game, you win 10 points for a goal (?) and lose 15 for a foul. After 6 goals and 5 fouls, what is the score?
4. The sum of two integers is -25. If one is 45, find the other using the equation $x + 45 = -25$.
5. A shopkeeper sells 50 kg of sugar at ₹5 profit/kg and 20 kg of rice at ₹8 loss/kg. Calculate total profit/loss.
6. A hiker starts at -20 m (valley), climbs to 150 m, then drops 40 m. Find the final elevation. ?
7. Prove using an example: Is the difference between a negative integer and a positive integer always negative?
8. The temperature of a chemical drops 3°C every 15 mins. If it starts at 12°C , what is it after 2 hours? ?
9. A merchant has a debt of ₹5000. He clears it and makes a profit of ₹2000. What was his total earning? ?
10. Challenge: Find the value of $(-20) + (-15) - (-35)$ and represent it on a horizontal number line.