

# Class 6 Integers Worksheet

By Thinking Juggernaut

Name: \_\_\_\_\_

Class: 6

Date: \_\_\_\_\_

Total Marks: 24

## What are Integers?

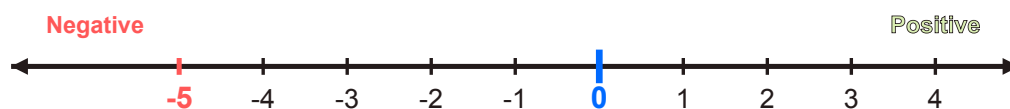
**Integers** are whole numbers that can be positive, negative, or zero. They include all counting numbers, their opposites, and zero.

### Types of Integers:

- **Positive Integers:** Numbers greater than zero → 1, 2, 3, 4, 5, ... (written with or without + sign)
- **Negative Integers:** Numbers less than zero → -1, -2, -3, -4, -5, ... (always written with - sign)
- **Zero (0):** Neither positive nor negative

### The Number Line:

Integers can be shown on a number line. Positive integers are to the right of zero, and negative integers are to the left of zero.



### Important Points to Remember:

- Every positive number has an opposite negative number
- On a number line, numbers increase as we move from left to right
- -5 is less than -2 (because -5 is farther left on the number line)
- The greater the negative number's value, the smaller the integer (e.g.,  $-10 < -3$ )

## Sample Problem with Solution

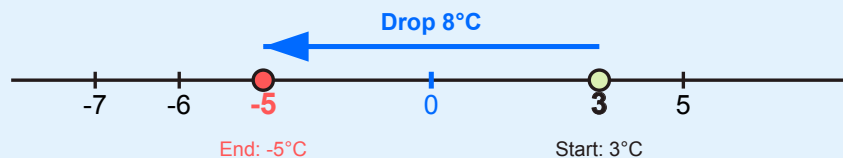
**Question:** The temperature in Shimla on Monday was  $3^{\circ}\text{C}$ . On Tuesday, it dropped by 8 degrees. What was the temperature on Tuesday? Show this on a number line.

**Solution:**

**Step 1:** Monday's temperature =  $3^{\circ}\text{C}$  (positive integer)

**Step 2:** Temperature dropped =  $-8$  degrees (negative change)

**Step 3:** Tuesday's temperature =  $3 + (-8) = 3 - 8 = -5^{\circ}\text{C}$



**Answer:** The temperature on Tuesday was  $-5^{\circ}\text{C}$

## Part A: Warm-up (8 Questions) - 1 mark each

★ Easy Level

1. Write the integer that represents each situation:

a) 500 meters above sea level: \_\_\_\_\_

b) A loss of ₹250: \_\_\_\_\_

c) 15 degrees below zero: \_\_\_\_\_

d) 3 steps forward: \_\_\_\_\_

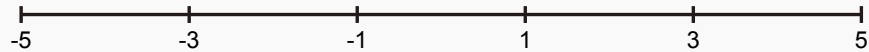
2. Fill in the blanks with the correct integer:

a) The opposite of  $+8$  is \_\_\_\_\_

b) The opposite of  $-12$  is \_\_\_\_\_

c) The opposite of  $0$  is \_\_\_\_\_

3. Mark the following integers on the number line below:  $-3, 0, 2, -1, 4$



4. True or False:

- a) -7 is greater than -3 \_\_\_\_\_
- b) 0 is an integer \_\_\_\_\_
- c) Every negative integer is less than 0 \_\_\_\_\_
- d) -1 is the smallest negative integer \_\_\_\_\_

5. Arrange the following integers in ascending order (smallest to largest):

-8, 3, -2, 0, 7, -5, 1

6. Which is greater in each pair? Circle the correct answer:

- a) -10 or -5    b) 0 or -3    c) -15 or -20    d) 4 or -7

7. Complete the pattern:

- a) 5, 3, 1, -1, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- b) -10, -7, -4, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

8. Match the following situations with the correct integer:

Situation	Integer	Your Answer
A submarine 200m below sea level	A) +50	

Profit of ₹50	B) -200	
5 floors below ground level	C) 0	
Sea level	D) -5	

## Part B: Practice (10 Questions) - 1 mark each

★★ Medium Level

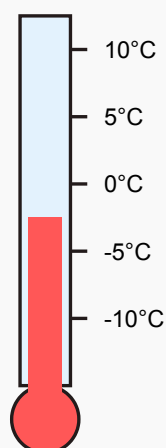
9. The temperature at 6 AM was  $-2^{\circ}\text{C}$ . By noon, it increased by 7 degrees. What was the temperature at noon?

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10. A diver is at 15 meters below sea level. He descends 8 more meters. At what depth is he now? Represent this using integers.

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11. Look at the thermometer below. What temperature does it show?



12. Ravi had ₹500 in his piggy bank. He spent ₹350 on books and then received ₹200 as a gift. How much money does he have now? Use integers with + and - signs to show the transactions.

13. Write all integers between -5 and 3 (including both).

14. A lift is on the 3rd floor. It goes down 5 floors and then goes up 2 floors. On which floor is the lift now? (Ground floor = 0)

15. In a quiz competition, correct answers get +3 points, wrong answers get -2 points, and unattempted questions get 0 points. Priya answered 6 questions correctly, 3 questions wrongly, and left 1 question. What is her total score?

16. Complete the table by writing the predecessor and successor of each integer:

Predecessor	Integer	Successor
	-7	
	0	
	-1	

15

17. The highest point in India is Mount K2 at approximately 8,611 meters above sea level (+8611). The deepest point in the Indian Ocean near India is the Java Trench at approximately 7,450 meters below sea level. Write this as an integer and find the difference between these two points.

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18. Using the number line, find how many integers are there:

a) Between -6 and 0 (not including -6 and 0) \_\_\_\_\_

b) From -4 to 4 (including both) \_\_\_\_\_

### Part C: Challenge (6 Questions) - 1 mark each

☆☆☆ Hard Level

19. A bird is flying 20 meters above ground level (+20). It sees food and dives down 35 meters. Where is the bird now relative to ground level? Is it above or below ground?

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20. The table shows the temperatures in different cities on the same day. Answer the questions:

City	Temperature (°C)
Delhi	8°C

Shimla	-3°C
Srinagar	-7°C
Mumbai	22°C

- Which city is the coldest? \_\_\_\_\_
- Which city is the warmest? \_\_\_\_\_
- What is the temperature difference between Delhi and Srinagar? \_\_\_\_\_
- Arrange the cities from coldest to warmest: \_\_\_\_\_

**21.** In a game, Amit starts with 0 points. In round 1, he gains 15 points. In round 2, he loses 8 points. In round 3, he loses 12 points. In round 4, he gains 20 points. What is his final score? Show all steps using integers.

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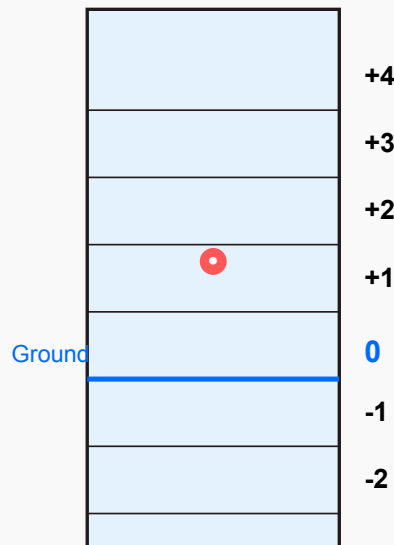


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**22.** A parking lot has 5 floors above ground (1, 2, 3, 4, 5) and 3 floors below ground (-1, -2, -3). A car is parked on floor -2. The driver takes the car up 6 floors. On which floor is the car now?

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**23.** The picture shows a building with floors marked. Answer the questions:



- a) On which floor is the person standing? \_\_\_\_\_
- b) If the person goes down 4 floors, where will they be? \_\_\_\_\_
- c) How many floors are there in total? \_\_\_\_\_

**24.** A number line shows integers. If you start at -8 and move 12 units to the right, where will you land? Then, if you move 5 units to the left from there, what will be your final position? Explain using a number line or calculations.

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## Answer Key

### Part A: Warm-up (Easy)

1. a) +500, b) -250, c) -15, d) +3

2. a) -8, b) +12, c) 0



3. Students should mark correctly on number line

5. -8, -5, -2, 0, 1, 3, 7

7. a) -3, -5, -7; b) -1, 2, 5

4. a) False, b) True, c) True, d) False

6. a) -5, b) 0, c) -15, d) 4

8. Submarine: B, Profit: A, Floors: D, Sea level: C

### Part B: Practice (Medium)

9.  $5^{\circ}\text{C}$  (Solution:  $-2 + 7 = 5$ )

11.  $-7^{\circ}\text{C}$  (Mercury level is between  $-5^{\circ}\text{C}$  and  $-10^{\circ}\text{C}$ )

13. -5, -4, -3, -2, -1, 0, 1, 2, 3

15. 12 points (Solution:  $6 \times 3 + 3 \times (-2) + 0 = 18 - 6 = 12$ )

17. -7450; Difference = 16,061 meters

10. -23 meters (Solution:  $-15 + (-8) = -23$ )

12. ₹350 (Solution:  $500 - 350 + 200 = 350$ )

14. Floor 0 (Ground floor) (Solution:  $3 - 5 + 2 = 0$ )

16. -8, -7, -6; -1, 0, 1; -2, -1, 0; 14, 15, 16

18. a) 5 integers, b) 9 integers

### Part C: Challenge (Hard)

19. -15 meters (below ground) (Solution:  $20 - 35 = -15$ )

21. 15 points (Solution:  $0 + 15 - 8 - 12 + 20 = 15$ )

23. a) +2, b) -2, c) 7 floors

20. a) Srinagar, b) Mumbai, c)  $15^{\circ}\text{C}$ , d) Srinagar, Shimla, Delhi, Mumbai

22. Floor 4 (Solution:  $-2 + 6 = 4$ )

24. First position: 4, Final position: -1 (Solution:  $-8 + 12 = 4$ , then  $4 - 5 = -1$ )

## How Did You Do? - Progress Guide

### Score Interpretation:

🌟 **20-24 marks (Excellent!):** You have a strong understanding of integers! You're ready to move on to operations with integers. Practice a few challenging word problems daily to stay sharp.

★ **15-19 marks (Very Good!):** You understand most concepts well. Review the questions you got wrong, especially in Part C. Practice number line problems and real-life applications for 15 minutes daily.

✨ **10-14 marks (Good Start!):** You have the basics but need more practice. Focus on:

- Understanding negative numbers on the number line
- Comparing integers (remember: numbers to the right are always greater)
- Solving 10 simple word problems about temperature and money daily

💡 **Below 10 marks (Keep Trying!):** Don't worry! Integers are tricky at first. Here's your action plan:

- **Week 1:** Draw a number line from -10 to +10. Practice placing integers and finding opposites daily
- **Week 2:** Practice comparing two integers using the number line. Remember: right side is always greater
- **Week 3:** Solve 5 real-life word problems daily (temperature, money, elevation)
- **Week 4:** Attempt this worksheet again and see your improvement!

### Targeted Practice Based on Your Performance:

#### If you struggled with Questions 1-8 (Basic Understanding):

- **Number Line Practice:** Create your own number line and mark 5 different integers daily
- **Real-Life Connection:** Notice integers around you - thermometers, lift buttons, bank statements
- **Opposite Numbers:** Every day, write 5 pairs of opposite integers (e.g., 7 and -7)
- **Comparison Trick:** On a number line, the number on the RIGHT is ALWAYS greater

#### If you struggled with Questions 9-18 (Applications):

- **Word Problem Strategy:** Read carefully, identify the starting point, then track increases (+) and decreases (-)
- **Temperature Problems:** Remember - "increase" means move right, "decrease" means move left on number line
- **Money Problems:** Earning/Receiving = Add (+), Spending = Subtract (-)
- **Predecessor & Successor:** Predecessor = 1 less (move left), Successor = 1 more (move right)

### If you struggled with Questions 19-24 (Complex Problems):

- **Multi-Step Problems:** Write down each step separately. Don't try to solve in one jump
- **Draw Diagrams:** For building/lift problems, draw a simple sketch showing floors
- **Track Running Total:** For games/transactions, keep a running total after each round
- **Check Your Answer:** Does it make sense? If temperature drops, should it be positive or negative?

✨ Great Job Completing This Worksheet! ✨

Understanding integers is your first step to mastering mathematics!

🔥 Practice with number lines daily for 10 minutes

📖 Look for integers in everyday life - temperature, scores, money!

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