Name & Surname: _____ Class: _____ Date: _____

# Adding and Subtracting Integers

Use number lines and opposites to get the right sign



About 50 minutes Level ★★★☆☆

## Adding and Subtracting Integers

Integers are whole numbers: positives, negatives, and zero. A **number line** shows each move and its result.

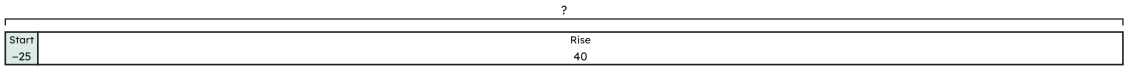
- To add, start at the first number. Move **right** for a positive, **left** for a negative.
- To subtract, add the **opposite**: keep the first number, change - to +, flip the sign of the second.
- Same signs: add **absolute values** and keep the sign. Different signs: subtract and keep the sign of the number with the larger absolute value.
- Distance between two numbers is the **absolute value** of their difference.

### Task A

/2

**Read each story. Use the bar model to find the missing value.**

**1** A submarine is at -25 feet. It rises 40 feet. What is its new position in feet?




**Answer:** _____ **feet**



Created with LessonDino.com · AI lesson planner with checkable sources

# Add Integers Confidently

Practice adding integers with the same and different signs.

## Key words

**integer:** a whole number: positive, negative, or zero

**absolute value:** distance from zero, always zero or positive

**number line:** a line that shows numbers in order

**opposite:** two numbers the same distance from zero on different sides

**sum:** answer to an addition problem

**Task B** /12

**Work alone. Use a number line if it helps you see the move.**

### WARM UP

1. Work out 4 + 7

   Answer: _____

2. Work out -5 + (-2)

   Answer: _____

3. Work out -6 + 9

   Answer: _____

4. Work out 6 + (-10)

   Answer: _____

### PRACTICE

5. Work out -8 + 5 + (-2)

   Answer: _____

6. Work out -3 + 8 + (-8)

   Answer: _____

7. Find the missing number: -4 + ? = 3

   Answer: _____

8. Work out |-9| + (-4)

   Answer: _____

### PROBLEM SOLVING

9. In the morning the temperature was -4°F. It rose 10°F by noon. What was the noon temperature?

   Answer: _____

10. A submarine sits at -30 feet. It descends 15 feet more. What is its new position in feet?

    Answer: _____

11. A student says -5 + 8 = -13. Explain how you know the student is wrong.

    Answer: _____

12. Is -2 + 7 the same as 7 + (-2)? Explain how you know.

    Answer: _____



Created with LessonDino.com · AI lesson planner with checkable sources

# Subtract With Opposites

Turn every subtraction into adding the opposite.

**Task C** /12

**Rewrite each subtraction first. Watch the sign of the second number.**

## WARM UP

1. Work out 5 - 8

   Answer: _____

2. Work out -3 - 4

   Answer: _____

3. Work out 7 - (-2)

   Answer: _____

4. Work out -6 - (-3)

   Answer: _____

## PRACTICE

5. Work out -10 - 5 - (-8)

   Answer: _____

6. Work out 4 - (-6) + (-3)

   Answer: _____

7. Work out -2.5 + 1.5

   Answer: _____

8. Work out $\frac{3}{4} + (-\frac{1}{4})$

   Answer: _____

## PROBLEM SOLVING

9. A hiker stands at 200 feet. The hiker descends 350 feet into a canyon. What is the new elevation in feet?

   Answer: _____

10. An account shows -$47. After a $62 deposit, what is the new balance?

    Answer: _____

11. Find the missing number: 2 - ? = -5

    Answer: _____

12. Explain how you know that 4 - (-6) = 10 using **opposites**.

    Answer: _____



Created with LessonDino.com · AI lesson planner with checkable sources

# See Moves Clearly

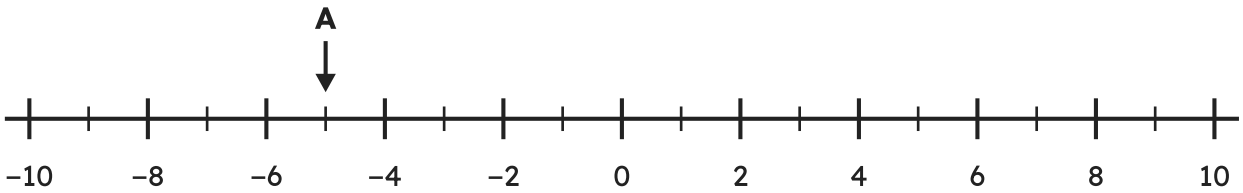
Read and show addition and subtraction on number lines.

↑↓ Task D

/4

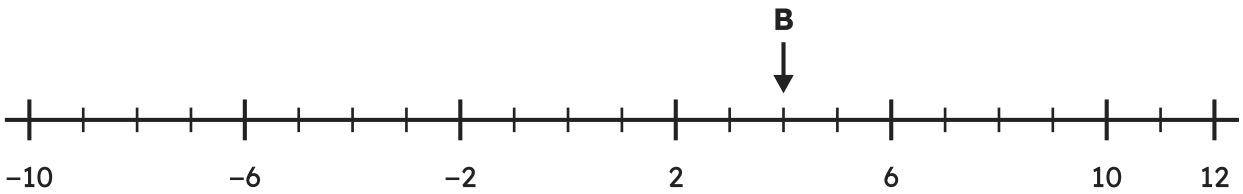
**Use each number line to show the start and the result.**

1




**A =** ☐ Draw an arrow to show: 3

2




**B =** ☐ Draw an arrow to show: 10



Created with LessonDino.com · AI lesson planner with checkable sources

# Adding and Subtracting Integers

**Task E** /6

**Answer in order. Explain your thinking clearly.**

**Remember** What is the opposite of -8?

**Understand** Explain what -5 + 8 means on a horizontal number line.

**Apply** Show 4 - (-6) on a number line. What is the result?

**Analyse** Compare -7 + 4 and -7 - 4. Why is one -3 and the other -11?

**Evaluate** Student A says 5 - (-3) = 2 because subtraction makes smaller. Is Student A right? Explain.

**Create** Write a real-life story for -6 - (-2) = -4 and show it on a vertical number line.



Created with LessonDino.com · AI lesson planner with checkable sources

# Sort and Check

Sort results by sign, then study worked methods.

## ↑↓ Task F

Example done for you

/5

**Sort each expression by whether its result is positive or negative.**

-7 + 2 | -3 - (-8) | -9 - (-12) | 4 + (-10) | ~~6 + (-2)~~ | 5 - 9

| Positive result | Negative result |
|---|---|
| 6 + (-2) | |
| | |
| | |
| | |

## Task G

/2

**Study each method, then try the matching question the same way.**

**WORKED EXAMPLE**

Work out -6 + 9

1. Find absolute values: 6 and 9
2. Subtract smaller from larger: 9 - 6 = 3
3. Keep sign of larger: positive, so 3

**Answer:** 3

**YOUR TURN**

Work out -4 + 11

**Answer:** _____

**WORKED EXAMPLE**

Work out 5 - (-3)

1. Keep the first number: 5
2. Change to add the opposite: 5 + 3
3. Add: 5 + 3 = 8

**Answer:** 8

**YOUR TURN**

Work out -2 - (-7)

**Answer:** _____

## How did I do?

Circle a face for each line.

I can add integers with the same and different signs. ☹ 😐 ☺

I can subtract by adding the opposite. ☹ 😐 ☺

I can show addition and subtraction on a number line. ☹ 😐 ☺



Created with LessonDino.com · AI lesson planner with checkable sources

# Answer sheet: Adding and Subtracting Integers

**Task A**

1. 15 feet

---

**Task B**

1. 11
2. -7
3. 3
4. -4
5. -5
6. -3
7. 7
8. 5
9. 6°F
10. -45 feet
11. Different signs means subtract: 8 - 5 = 3, keep the sign of the larger, so the answer is 3, not -13.
12. Yes, addition can be done in any order, and both start at different points but move to 5.

---

**Task C**

1. -3
2. -7
3. 9
4. -3
5. -7
6. 7
7. -1
8. $\frac{1}{2}$
9. -150 feet
10. $15
11. 7
12. Subtracting -6 means adding its opposite, so 4 - (-6) = 4 + 6 = 10.

---

**Task D**

1. A = -5; arrows at 3
2. B = 4; arrows at 10

---

**Task E**

1. 8
2. Start at -5 and move 8 steps right to land at 3.
3. Start at 4, move 6 right because you subtract a negative, land at 10.
4. -7 + 4 moves right 4 to -3. -7 - 4 means add -4 and moves left 4 to -11.
5. No. 5 - (-3) = 5 + 3 = 8. Subtracting a negative moves right, so the result is larger.
6. Example: temperature was -6°F and rose 2°F to -4°F. Start at -6, move up 2 to -4.

---

**Task F**

Positive result: 6 + (-2), -3 - (-8), -9 - (-12)

Negative result: -7 + 2, 5 - 9, 4 + (-10)

---

**Task G**

1. 7
2. 5

---

Pictures: Microsoft Fluent Emoji (MIT)



Created with LessonDino.com · AI lesson planner with checkable sources