

OPERATIONS WITH INTEGERS



Understanding how to use operations $+, -, \times, \div$ with integers.

LEVEL 1: The Basics

Q1: Find the answer to the following

❖ $7 + (-3) =$	❖ $(-24) \div (-8) =$	❖ $-7 \times (-1) =$
❖ $0 \div (-4) =$	❖ $-4 + (-6) =$	❖ $10 + (-10) =$
❖ $6 \times 0 =$	❖ $(-6) \times 9 =$	❖ $-18 \div (-6) =$
❖ $-12 - (-5) =$	❖ $(-7) \times (-3) =$	❖ $-9 \times 2 =$
❖ $-4 + (-9) =$	❖ $(-45) \div 5 =$	❖ $5 + (-3) =$
❖ $25 \div (-5) =$	❖ $6 - (-8) =$	❖ $-20 \div 5 =$
❖ $-15 + 10 =$	❖ $4 \times (-2) =$	❖ $0 - (-2) =$
❖ $-8 + 2 =$	❖ $-5 \times 3 =$	❖ $15 \times -6 =$

Q2: The temperature is -3°F at 7:00 a.m. During the next 4 hours, the temperature increases 21°F . What is the temperature at 11:00 a.m.?

Q3: Use mental math to solve the equation.

- a) $4 + x = 15$
- b) $x - 9 = -9$
- c) $3x = -45$
- d) $\frac{15}{x} = -3$

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LEVEL 2: Dive Deeper

Q1: Find the answer to the following

❖ $(-31) + 42 =$

❖ $(-2) \times (8) \times 5 =$

❖ $(-12) \times (-6) =$

❖ $234 \div (-6) =$

❖ $(-48) \div 6 =$

❖ $(-5) + (-1) + 4 =$

❖ $(-42) \times (3) =$

❖ $(-12) \times (-4) =$

❖ $10 - (-35) + 32 =$

❖ $-30 + (-721) =$

❖ $(-7) \times (-2) \times (-5) =$

❖ $(-232) + 155 =$

❖ $(-3) + 7 - (-2) =$

❖ $45 + (-4) + 65 + (-45) =$

❖ $54 \times (-3) =$

❖ $100 \div (-5) =$

Q2: Write two integers with different signs that have a sum of -25 .

Write two integers with the same sign that have a sum of -25 .

Q3: What number can be added to -4 to get a sum of 17 ?

Q4: Adam scored 10 points in the first round of a game. He then lost 20 points in the second round. In the final round he earned 40 points. What was Adam's score at the end of the game?

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LEVEL 3: Mastering the Concept

Q1: Solve the following problems.

1) Find the missing number: $-7 + \underline{\quad} = -15$

2) Find the missing number: $\underline{\quad} \times (-6) = 42$

3) Which of the following has a greater value:

a. $-25 + 126$

b. -6×-19

c. $-1200 \div 10$

4) Evaluate the expression $a - b \times c$ if $a = -6$, $b = 4$, and $c = 5$

Q2: Find two different integers that, when multiplied together, equal -24, and when added together, equal to 5.

What are the two integers?

Q3: Find the answer to the following

a) $43 \times -3 \times -1$

b) $45 - |-51|$

c) $9 + |(-12) + 3|$

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Real-Life / Word Problems (Additional)

- 1) Temperature Change: The temperature in a city was -5°C in the morning. By afternoon, it rose by 12°C , and by night, it dropped by 8°C . What was the final temperature at night?

- 2) Banking: You have 250 in your bank account. You make a withdrawal of 75, then deposit 120, and finally, pay a bill of 90. What is your final balance?

- 3) Elevator Ride: an elevator starts on the 3rd floor. It goes down 5 floors, then up 10 floors, and finally down 2 floors. On which floor does the elevator stop?

Challenge: Magic Square

- 1) Place each of the integers from the list below into the 3×3 grid.
- 2) You can only use each number once.
- 3) The numbers in each row, each column, and each of the two main diagonals must add up to a "magic sum" of 0.

Number list: $\{-4, -3, -2, -1, 0, 1, 2, 3, 4\}$