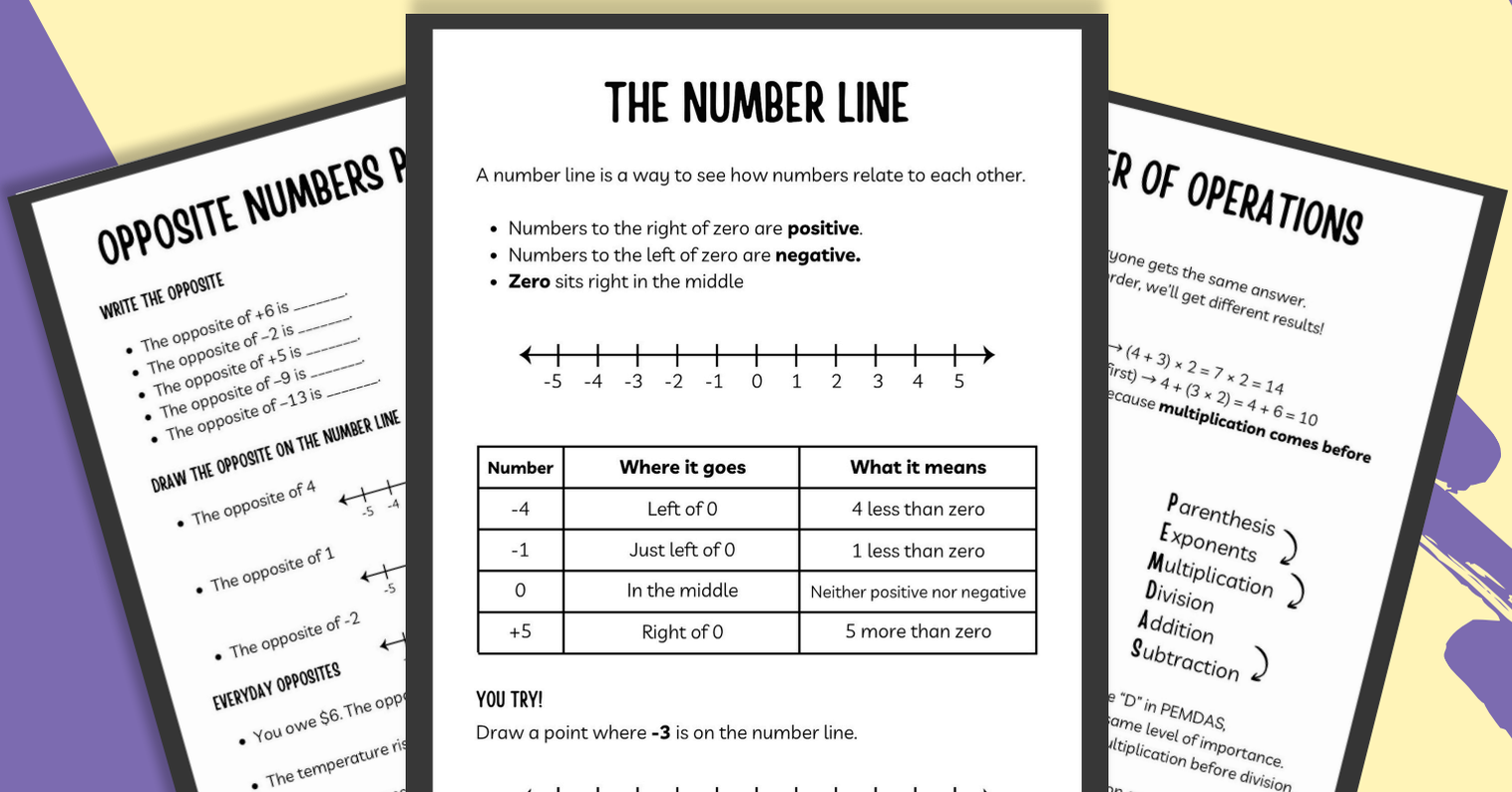
GAUSS Mathematics

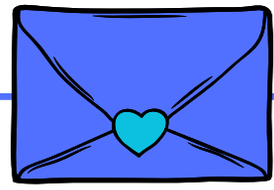
UNDERSTANDING NEGATIVE NUMBERS

LEARNING MATH – MADE EASY!

- Number Basics
- Number Lines
- Adding and Subtracting
- Multiplying and Dividing
- Order of Operations
- Word Problems
- Step-by-Step Examples
- Practice Pages and Review



GAUSS Mathematics
gaussmathematics05@gmail.com
Empowering learners with visual, accessible math.



Dear Learner, Parent, or Educator,

This workbook was made with a lot of heart to show you that negative numbers aren't scary at all. They're just another way to understand the world, and once you get used to them, they're actually pretty cool.

Whether you're learning on your own, working with a parent, or following along in class, this book is here to help you take math one clear step at a time. With colorful visuals, simple explanations, and real-life examples like shopping, time, and travelling, everything will start to click.

At GAUSS Mathematics, we believe everyone can learn math in a way that makes sense. You'll find space to think, practice, and even make a few mistakes, because that's how real learning happens.'

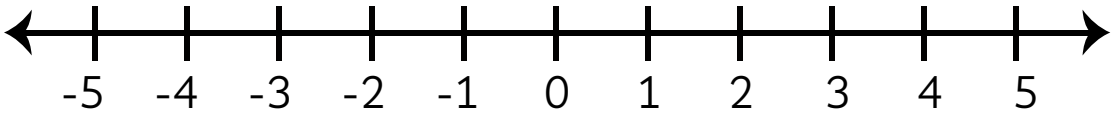
This isn't just another workbook. It's a way to see how math connects to your everyday life and to build confidence as you go. So grab a pencil, smile, and get ready to explore negative numbers and operations. You've got this!

With encouragement,
GAUSS Mathematics

WHAT ARE NEGATIVE NUMBERS?

You already know positive numbers. They count things you have: like 1, 2, 3, 4, and so on. But what if you lose something, or something goes below zero? That's where negative numbers come in!

Negative numbers show less than zero. They represent losses, drops, or going below a starting point.



Numbers to the left of 0 are negative.
Numbers to the right are positive.
Examples:

- –3 is less than 0.
- +3 is greater than 0.
- Zero sits right in the middle. It is not positive nor negative.

YOU TRY!

Circle all the **negative numbers** below:

7 -4 -9 2 0 -1

SEEING NEGATIVES IN REAL LIFE

Here are some examples of negative numbers that show up in real life:

WEATHER AND TEMPERATURE

When it's cold outside, temperatures can go **below zero**. This means they are negative numbers. They are colder than freezing!

Example	Math	Meaning
A winter day is -10*C	-10	10 degrees below zero
A warm day is 20*C	20	20 degrees above zero
Freezing point	0	neither above nor below

MONEY

Negative numbers also show when money is **lost or owed**.

Example	Math	Meaning
You earn $5	5	gain of $5
You spend $5	-5	loss of $5
Your balance is 0	0	nothing gained or owed

BUILDINGS AND ELEVATORS

Elevators can go above and below ground. We call the below-ground floors **negative levels.**

Math	Meaning
+3	3rd floor above ground
0	Ground level
-1	1 floor below ground
-2	2 floors below ground

ALTITUDE AND DEPTH

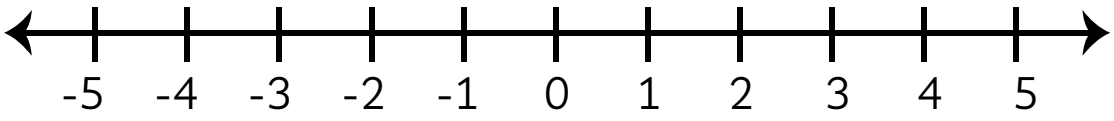
Negatives can also show how far below sea level something is! Above sea level indicates a **positive** number while below sea level indicates a **negative** one.

Example	Math	Meaning
Mount Everest	8,849 m	8,849 meters above sea level
Sea Level	0 m	Neither above nor below
The Dead Sea	-430 m	430 meters below sea level
Airplane overhead	10,000 m	10 kilometers above sea level

THE NUMBER LINE

A number line is a way to see how numbers relate to each other.

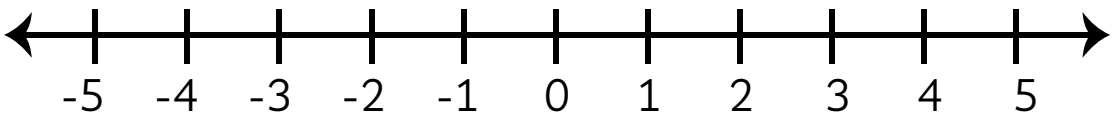
- Numbers to the right of zero are **positive**.
- Numbers to the left of zero are **negative.**
- **Zero** sits right in the middle



Number	Where it goes	What it means
-4	Left of 0	4 less than zero
-1	Just left of 0	1 less than zero
0	In the middle	Neither positive nor negative
+5	Right of 0	5 more than zero

YOU TRY!

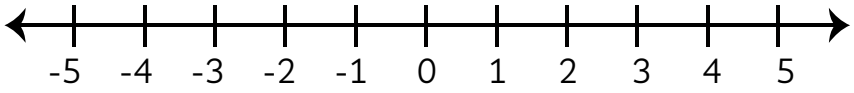
Draw a point where **-3** is on the number line.



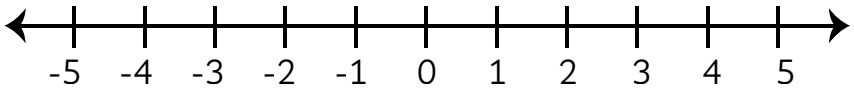
PRACTICE: THE NUMBER LINE

Directions: Place each number on the number line.

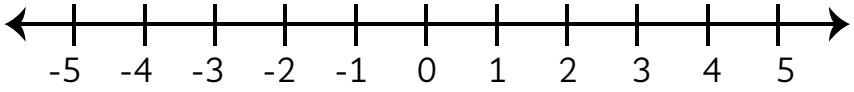
1. -2



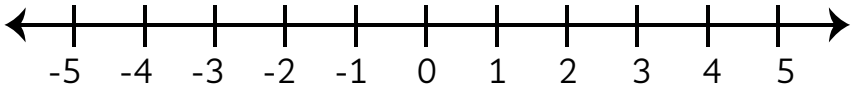
2. 0



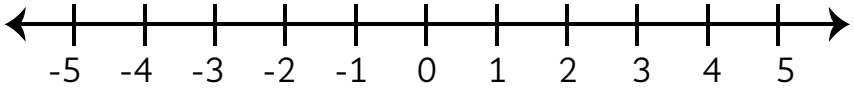
3. You lose $6



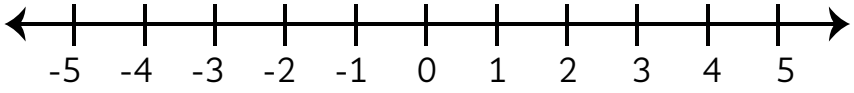
4. You gain $3



5. It is -1 degrees in Toronto



6. You are on the 4^{th} floor



PRACTICE: NEGATIVE NUMBERS

Directions: Write the number that matches the situation.

A. It's a snowy day in Alaska. The thermometer shows the red line below zero, at 8 marks under 0.
Temperature: _____°C (Above / Below / At zero?) _____

B. In sunny Florida, the temperature is warm — 25 degrees higher than freezing!
Temperature: _____°C (Above / Below / At zero?) _____

C. A scientist records the freezing point of water.
Temperature: _____°C (Above / Below / At zero?) _____

D. The city of Denver wakes up to –2°C, but by noon it's back to 0°C.
Morning: _____°C Noon: _____°C

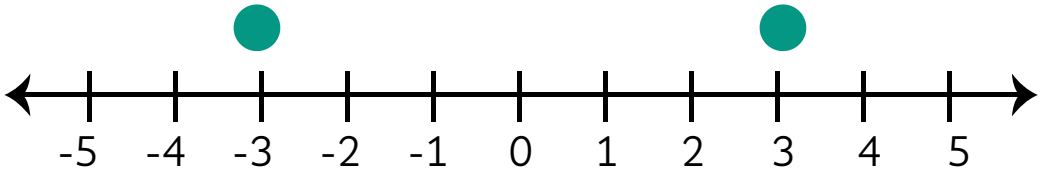
Story	Floor #
The gym is 2 floors below ground.	
The café is 4 floors above ground.	
The lobby is the ground floor.	
The offices are 5 floors above ground.	

OPPOSITE NUMBERS

Every number has a twin on the other side of zero. It is a number that is the same distance away, but in the opposite direction.

For example:
If +3 is three steps right of zero, then –3 is three steps left of zero.

They are opposites because they are equal in distance but different in direction.



Examples:

- +2 and –2 are opposites.
- +7 and –7 are opposites.
- Going up 3 floors is the opposite of going down 3 floors
- Earning $5 is the opposite of owing $5

YOU TRY!

- The opposite of +5 is _____.
- The opposite of –2 is _____.
- The opposite of +3 is _____.
- The opposite of –1 is _____.
- The opposite of –7 is _____.

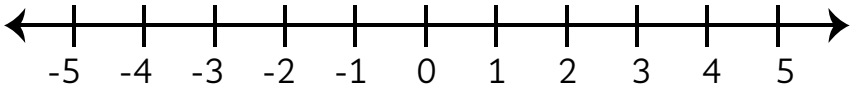
OPPOSITE NUMBERS PRACTICE

WRITE THE OPPOSITE

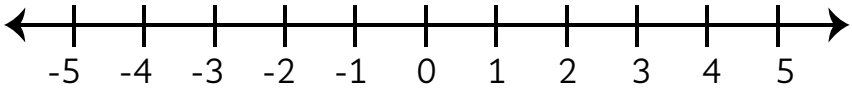
- The opposite of +6 is _____.
- The opposite of –2 is _____.
- The opposite of +5 is _____.
- The opposite of –9 is _____.
- The opposite of –13 is _____.

DRAW THE OPPOSITE ON THE NUMBER LINE

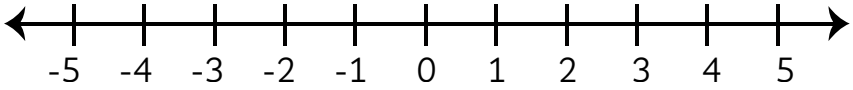
- The opposite of 4



- The opposite of 1



- The opposite of -2



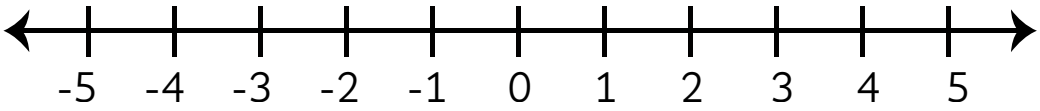
EVERYDAY OPPOSITES

- You owe $6. The opposite is _____.
- The temperature rises +8°C. The opposite is _____°C.
- The elevator goes down 4 floors. The opposite is _____.
- A diver is 10 meters below sea level. The opposite is _____.

WHICH IS BIGGER?

A number line shows us how numbers grow and shrink.

- The farther **right** you go, the **bigger** the number.
- The farther **left** you go, the **smaller** the number.



Notice that -2 is to **the left** of +2. That means that -2 is **less than** +2.

YOU TRY!

Alaska has a temperature of –8°C. Paris is at +3°C. Cairo is +15°C.
Which city is the **coldest**? _____

You have +5 dollars. Your friend owes –5 dollars
Who has **more** money? _____

Put these in order from coldest to warmest:
–7°C 0°C +3°C –2°C
Answer: _____

If one person owes money (–5) and one has $2 (+2), the person with +2 has _____ money.

A car parked at –3 floors is _____ ground level.

COMPARING NEGATIVES PRACTICE

Circle the number that is greater (the one more to the right on a number line)

a) −2 −5
b) −8 −3
c) −1 0
d) −4 −6
e) +3 −2
f) −7 −9

Fill in the Blanks with > or <. Use the correct sign:
> means greater than and **<** means less than

a) −3 _____ −5
b) −7 _____ −2
c) −1 _____ +1
d) 0 _____ −4
e) −9 _____ −6

Write which number is greater in each pair:

a) −4 or −2? _____
b) −1 or −5? _____
c) 0 or −3? _____
d) +2 or −4? _____
e) −6 or −1? _____

Choose the correct answer.

- The temperature in City A is –10°C. The temperature in City B is –4°C. Which city is warmer? _____

- A diver is at –20 meters. A swimmer is at 0 meters. Who is deeper underwater? _____

- You have +5 dollars. Your friend owes –5 dollars. Who has more money? _____

- One mountain peak is +2,000 m high. A valley is –400 m below sea level. Which is higher? _____

Circle the number that makes sense for each situation.

- A submarine dives below the surface.
  a) +40 m b) –40 m

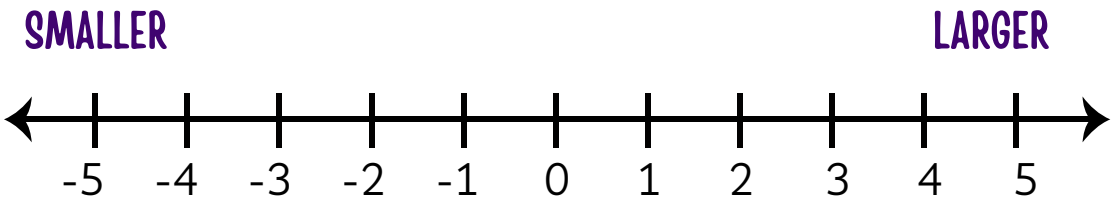
- The temperature outside is 10 degrees colder than 0 °C.
  a) +10 °C b) –10 °C

- You gain 5 points in a game.
  a) –5 b) +5

- A bank account shows a balance of –20 dollars. That means you _____ money.
  a) owe b) have

ORDERING NUMBERS

When we order numbers, we can think about where they are on a number line. The farther left they are, the smaller they are. And the farther right they are, the greater they are.



YOU TRY!

Practice writing from **least to greatest**.

a) −2 +3 0 −5 +1 → _____

b) +4 −1 −3 0 +2 → _____

c) −6 −2 −4 +1 0 → _____

Put these temperatures in order from **coldest to warmest**.

−7°C +5°C 0°C −3°C +2°C
Answer: _____

Order these balances from **smallest to largest**.

−8 +4 −1 0 +2
Answer: _____

ORDERING PRACTICE

Read each temperature carefully, then put them in order from **coldest to warmest.**

A.

−10°C +2°C 0°C −3°C

Answer: _____

B.

+5°C −6°C +1°C −2°C 0°C

Answer: _____

Put the floors in order from **lowest to highest:**

A. Basement (−3)

B. Roof (+5)

C. Lobby (0)

D. 2nd floor (+2)

Put the balances in order from **least to greatest** (poorest to richest).

A. −10 0 +3 −2 +8

→ _____

B. −4. +5 −1 +2 0

→ _____

Order these from **deepest to highest:**

Submarine (−300 m) Fish (−50 m) Sea level (0 m) Mountain (+1,500 m)

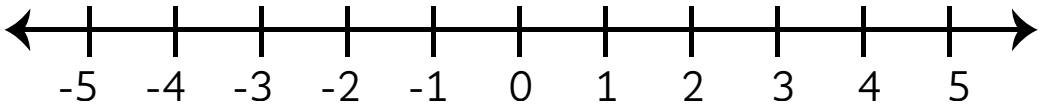
Answer: _____

ABSOLUTE VALUE

Absolute value means how far a number is from zero, no matter which direction it is on the number line.

Example:

- +3 is 3 units away from 0.
- -3 is also 3 units away from 0.



Think of it like steps away from zero!

Absolute value uses two straight bars, one on each side of the number, like this: **|number|**

So:

- |–3| means “the absolute value of negative three.”
- |+3| means “the absolute value of positive three.”

YOU TRY!

Write the absolute value of each number.

a) |+4| = _____

b) |–4| = _____

c) |–7| = _____

d) |+2| = _____

e) |0| = _____

ABSOLUTE VALUE PRACTICE

Draw a line from each number to its absolute value.

–6	**6**
+2	**5**
0	**0**
–5	**2**
+8	**8**

Write the **absolute value** of each number.

a) |–9| = _____
b) |+4| = _____
c) |–2| = _____
d) |+7| = _____
e) |0| = _____

Use absolute value to find **how far** each temperature is from 0°C.

a) –3°C → |–3| = _____°C
b) +5°C → |+5| = _____°C
c) –10°C → |–10| = _____°C

Draw a small number line showing these numbers:
–4 –2 0 +2 +4

MIXED REVIEW

Write +, –, or 0 for each situation.

a) A diver 12 meters below sea level → _____
b) You earn $5 → _____
c) The elevator goes up 3 floors → _____
d) The thermometer shows 0°C → _____
e) You owe $9 → _____
f) A plane 2,000 m above sea level → _____

Write the opposite of each number.

a) +4 → _____
b) –7 → _____
c) +10 → _____
d) –3 → _____
e) 0 → _____

Put the numbers in order, using a number line if needed.

a) –1 +3 0 –4 +1 → _____

b) +6 –2 –5 +4 0 → _____

c) –8 –1 –3 0 +2 → _____

Circle the number that is greater in each pair.

a) −2 −6
b) 0 −4
c) +3 −1
d) −5 +1
e) −7 −3

Fill in the Blanks with > or <

a) −4 _____ −2
b) 0 _____ −3
c) +1 _____ −5
d) −8 _____ −6
e) +3 _____ 0

Put these in order from coldest to warmest:

−8°C +5°C 0°C −2°C +3°C
→ _____

−10°C −4°C +6°C 0°C +2°C
→ _____

Put these in order from deepest (lowest) to highest (tallest):

+800 m −200 m 0 m −600 m +100 m
→ _____

Find the distance from zero for each number.

a) |–9| = _____
b) |+4| = _____
c) |–2| = _____
d) |0| = _____
e) |+6| = _____

A fish is –30 m below sea level.
|–30| = _____
A mountain peak is +30 m high.
|+30| = _____
Are they the same distance from sea level? _____

Fill in the missing numbers or signs.

a) Opposite of –4 = _____
b) |–7| = _____
c) –3 _____ 0
d) –2 and +2 have the same _____ value
e) +5 is _____ than –5

Draw your own number line from –6 to +6.
Then:

1. Mark and label –4, –1, 0, +2, and +5.
2. Circle the smallest number.

ADDING ON A NUMBER LINE

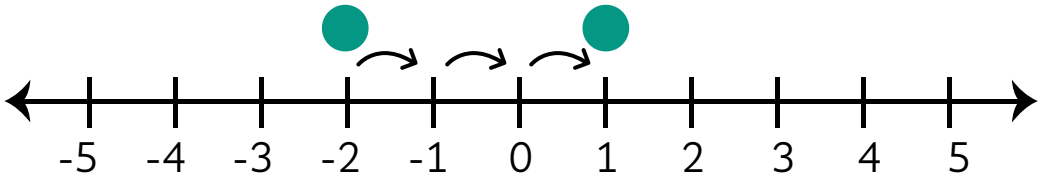
When we add, we move forwards or backwards on a number line. However, the direction depends on what we are adding!

- Adding a positive number means move right →
- Adding a negative number means move left ←

EXAMPLE - ADDING A POSITIVE

-2 + 3 = _____

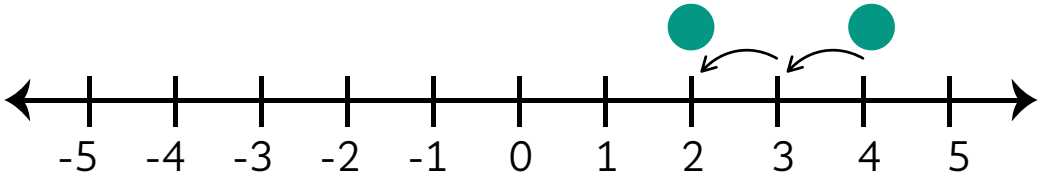
1. Start at -2
2. Move 3 steps right
3. Arrive at +1!



EXAMPLE - ADDING A NEGATIVE

+4 - 2 = _____

1. Start at +4
2. Mover 2 steps **left**
3. Arrive at +2!

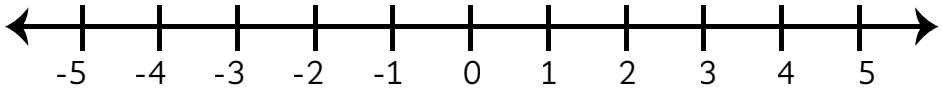


PRACTICE - ADDING ON A NUMBER LINE

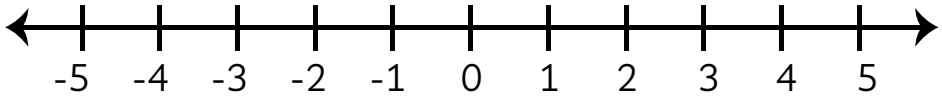
Use the number line to add the numbers. Remember:

- Adding a positive number means move right →
- Adding a negative number means move left ←

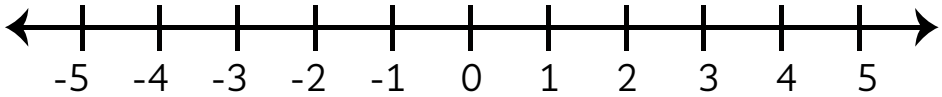
a) +3 + +2 = _____



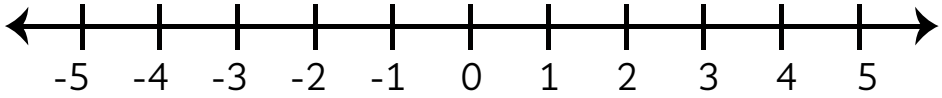
b) +5 + −3 = _____



c) −2 + +4 = _____



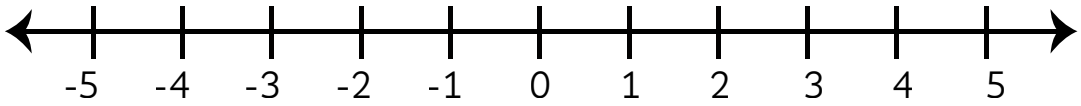
d) −3 + −1 = _____



Now try these! Draw a number line if needed.

a) +1 + +4 = _____
b) +3 + −2 = _____
c) −2 + +5 = _____
d) −1 + −3 = _____
e) +4 + −5 = _____

Use the number line to help you find each answer:



a) −4 + +3 = _____
b) +2 + −5 = _____
c) −1 + +4 = _____
d) +3 + −2 = _____
e) −5 + −1 = _____
f) +1 + +2 = _____

Use the idea of gaining (+) or losing (–) to find the total.

a) You gain 3 points, then gain 2 more → _____
b) You gain 5 points, then lose 3 → _____
c) You lose 4 dollars, then gain 2 → _____
d) You lose 2 points, then lose 3 more → _____
e) You gain 1, then lose 1 → _____

Draw a number line from –5 to +5. Use arrows to show each move. Try these:

- Start at –2, add +4 → _____

- Start at +3, add –5 → _____

ADDING IN REAL LIFE

In money and savings, positive numbers means you have or earn money. Negative means you owe or spend money.

Example:

You have $5. Then you spend $3.

+5 + −3 = +2

You still have $2 left!

YOU TRY!

a) You have $4. Then you spend $2.

→ +4 + −2 = _____

b) You owe $6. Then you earn $3.

→ −6 + +3 = _____

c) You have $2. Then you earn $5.

→ +2 + +5 = _____

d) You owe $3. Then you spend $2 more.

→ −3 + −2 = _____

e) It's −3°C. It warms up 2°C.

→ _____

f) It's +2°C. It gets 5°C colder.

→ _____

SUBTRACTING ON A NUMBER LINE

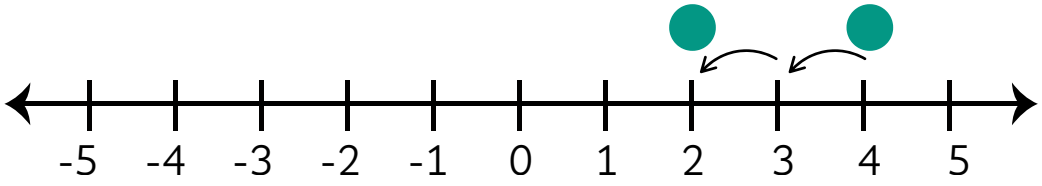
When we subtract, we move forwards or backwards on a number line. However, the direction depends on what whether we are subtracting a positive or a negative!

- Subtracting a positive number means moving left ←
- Subtracting a negative number means moving right →

EXAMPLE - SUBTRACTING A POSITIVE

+4 - +2 = _____

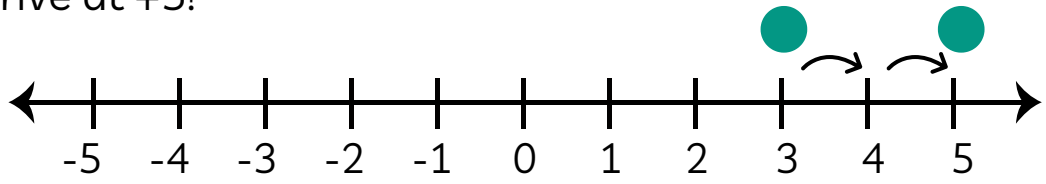
1. Start at +4
2. Move 2 steps left
3. Arrive at +2



EXAMPLE - ADDING A NEGATIVE

+3 - -2 = _____

1. Start at +3
2. Mover 2 steps right
3. Arrive at +5!

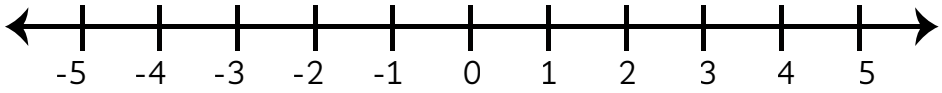


PRACTICE - SUBTRACTING ON A NUMBER LINE

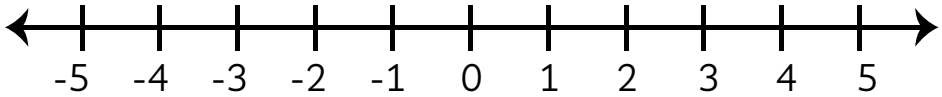
Use the number line to subtract the numbers. Remember:

- Subtracting a positive number means move left ←
- Subtracting a negative number means move right →

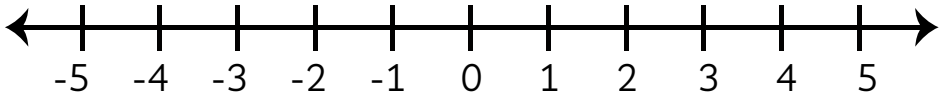
a) +4 – +3 = _____



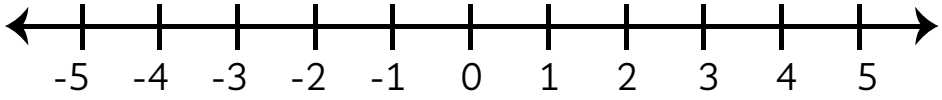
b) +5 – –2 = _____



c) –2 – +1 = _____



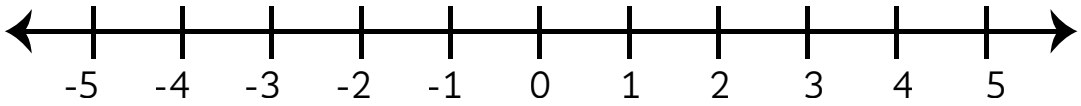
d) –3 – –2 = _____



Now try these! Draw a number line if needed.

a) +1 – +4 = _____
b) +3 – –2 = _____
c) –2 – +5 = _____
d) –1 – –3 = _____
e) +4 – –5 = _____

Use the number line to help you find each answer:



a) –4 – +3 = _____
b) +2 – –5 = _____
c) –1 – +4 = _____
d) +3 – –2 = _____
e) –5 – –1 = _____
f) +1 – +2 = _____

Think in terms of real life:

a) You have $5. You spend $2.
→ +5 – +2 = _____

b) You owe $6. You pay back $3.
→ –6 – +3 = _____

c) You owe $8. You cancel (subtract) a debt of $8.
→ –8 – (–8) = _____

d) It's +3°C. The temperature drops by 5°C.
→ +3 – +5 = _____

e) It's –2°C. The temperature drops 3°C.
→ –2 – +3 = _____

ADDING AND SUBTRACTING IN REAL LIFE

a) You have $8. You spend $5.
→ +8 – +5 = _____

b) You owe $7. You earn $4.
→ –7 + +4 = _____

c) You owe $6. You spend $2 more.
→ –6 + –2 = _____

d) You owe $9, but you pay off $9.
→ –9 – +9 = _____

e) It's –3°C in the morning. The temperature rises by 5°C.
→ –3 + +5 = _____

f) It's +6°C in the afternoon. It drops 8°C that night.
→ +6 – +8 = _____

g) It's –2°C and gets colder by 4°C.
→ –2 + –4 = _____

h) It's –5°C and then warms up by 5°C.
→ –5 + +5 = _____

i) Start at –3 points. Gain 7 points.
→ –3 + +7 = _____

ADDING AND SUBTRACTING

- +4 + −2 = _____
- −3 + +7 = _____
- +6 − +4 = _____
- +2 − −3 = _____
- −5 + −4 = _____
- −1 − +3 = _____
- +7 + +2 = _____
- −4 − −1 = _____
- +3 − +6 = _____
- −2 − −4 = _____
- −4 + −5 = _____
- +3 − −2 = _____
- −7 + +9 = _____
- +2 − +6 = _____
- −5 − −3 = _____
- +1 + −3 = _____
- −2 − +4 = _____
- +5 − −2 = _____
- +8 + −9 = _____
- −6 − +2 = _____

a) Start at 0, go up 5 floors → _____

b) Start at +3, go down 7 floors → _____

c) It's −3°C. It cools by 5°C.
→ −3 + −5 = _____

d) It's +1°C. It warms by 4°C.
→ +1 + +4 = _____

e) You have $3. You spend $6.
→ +3 + −6 = _____

f) You owe $5. You borrow $3 more.
→ −5 + −3 = _____

- +6 + −3 = _____
- −5 + +8 = _____
- +3 − +7 = _____
- −2 − −4 = _____
- +1 + −5 = _____
- −3 − +2 = _____
- +4 − −6 = _____
- −7 + +9 = _____
- −6 + −3 = _____
- +2 − +4 = _____

a) It's −5°C. It warms by 4°C.
→ −5 + +4 = _____

b) It's +3°C. It drops 8°C.
→ +3 + −8 = _____

c) It's −2°C. It cools by 3°C.
→ −2 + −3 = _____

d) Start at 0 and go up 6 floors.
→ _____

e) Start at +3 and go down 5 floors.
→ _____

f) Start at −4 and go up 7 floors.
→ _____

g) You start a game with −2 points and gain 8 points.
→ _____

h) You start a game with +6 points and lose 9 points.
→ _____

ORDER OF OPERATIONS

WHY ORDER MATTERS

Math has rules so everyone gets the same answer.
If we don't follow the order, we'll get different results!

For example:

$4 + 3 \times 2$

Way 1: (Do addition first) → $(4 + 3) \times 2 = 7 \times 2 = 14$

Way 2: (Do multiplication first) → $4 + (3 \times 2) = 4 + 6 = 10$

The correct answer is 10, because **multiplication comes before division**.

WHAT IS PEMDAS?

FOLLOW THIS ORDER!

Parenthesis
Exponents
Multiplication
Division
Addition
Subtraction

Even though the "M" comes before the "D" in PEMDAS, multiplication and division are on the same level of importance. That means you don't always do all multiplication before division.

Just like M and D, addition and subtraction are equals too. Do whichever comes first from left to right.

LETS PRACTICE IN ORDER

a) 2 + 3 × 4 =
→ Multiply first: 3 × 4 = 12
→ Then add: 2 + 12 = 14

b) 6 – 2 × 3 =
→ Multiply first: 2 × 3 = 6
→ Then subtract: 6 – 6 = 0

c) (6 – 2) × 3 =
→ Parentheses first: 6 – 2 = 4
→ Then multiply: 4 × 3 = 12

TRY THESE YOURSELF

a) 3 + 2 × 5 = _____

b) (3 + 2) × 5 = _____

c) 8 – 6 ÷ 3 = _____

d) (8 – 6) ÷ 3 = _____

e) 2 × 4 + 3 = _____

f) 2 × (4 + 3) = _____

g) (3 + 1) × 5 = _____

PEMDAS WITH NEGATIVES

PEMDAS still works the same way even when working with negative numbers. You just have to be careful with negative signs (–) inside parentheses.

EXAMPLES

a) $-2 + 4 \times 3 =$
→ Multiply first: $4 \times 3 = 12$
→ Then add: $-2 + 12 = 10$

b) $(-2 + 4) \times 3 =$
→ Parentheses first: $-2 + 4 = 2$
→ Then multiply: $2 \times 3 = 6$

YOU TRY

a) $5 + (-3) \times 2 =$ _____

b) $(-6 + 2) \times 4 =$ _____

c) $-8 + 3 \times (-2) =$ _____

d) $(-4 + -3) \times 2 =$ _____

e) $-10 \div (-2) + 1 =$ _____

f) $(-3) \times (-2) + 5 =$ _____

PEMDAS PRACTICE

a) $3 + (-2) \times 4 =$ _____

b) $(-5 + 3) \times 2 =$ _____

c) $-6 + 2 \times (-3) =$ _____

d) $(-8 + 4) \div 2 =$ _____

e) $10 - (-2) \times 3 =$ _____

f) $(-12 \div 3) + 5 =$ _____

g) $(-3) \times (-2) + 6 =$ _____

h) $(-9 + 3) \times (-2) =$ _____

i) $(-15 \div 5) + (-4) =$ _____

j) $-10 + 4 \times (-2) =$ _____

k) $(-2 + 6) \times (-3) =$ _____

l) $(-4 \times 3) + (-2) =$ _____

m) $-12 \div (-3) + 4 =$ _____

n) $(-8 + 2) \times (-1) =$ _____

SOLVE STEP-BY-STEP

a) (–6 + 4) × (–2) + 3 = _____
Step 1: (–6 + 4) = _____
Step 2: _____ × (–2) = _____
Step 3: _____ + 3 = _____

b) (–8 ÷ 2) + (–3) × 4 = _____
Step 1: (–8 ÷ 2) = _____
Step 2: _____ + (–3) × 4 = _____
Step 3: _____ + _____ = _____

c) 5 + (–3) × (–2) – 1 = _____
Step 1: (–3) × (–2) = _____
Step 2: 5 + _____ – 1 = _____
Step 3: _____ – 1 = _____

MORE PRACTICE

d) (–9 + 6) × (–3) + 4 = _____

e) 8 – (–2) × (–4) = _____

f) (–10 ÷ (–2)) + (–3) = _____

g) –5 + (–2) × (–3) = _____

h) (–4 × 2) + (–6 ÷ 3) = _____

i) (–15 ÷ 5) – (–2 × 3) = _____

PEMDAS WORD PROBLEMS

a) You owe $6 and spend 3 more dollars each day for 2 days.
→ Expression: −6 + (____ × ____)
→ Step 1: _____ × _____ = _____
→ Step 2: −6 + _____ = _____
Answer: _____

b) You earn $4 each day for 3 days, then spend $5.
→ Expression: (4 × ____) − ____
→ Step 1: _____ × _____ = _____
→ Step 2: _____ − _____ = _____
Answer: _____

c) You lose $8 one week, but gain $2 each day for 4 days.
→ Expression: (____) + (2 × ____)
→ Step 1: _____ × _____ = _____
→ Step 2: (−8) + _____ = _____
Answer: _____

d) The temperature drops 3°C per hour for 4 hours, then rises 5°C.
→ Expression: (−3 × ____) + ____
→ Step 1: _____ × _____ = _____
→ Step 2: _____ + 5 = _____
Answer: _____

e) The temperature rises 2°C per hour for 3 hours, then drops 10°C.
→ Expression: (2 × 3) – 10
→ Step 1: _____ × _____ = _____
→ Step 2: _____ – 10 = _____
Answer: _____

f) A basketball player scores 3 points each in 4 shots, then loses 5 points for fouls.
→ Expression: (3 × 4) – 5
→ Step 1: _____ × _____ = _____
→ Step 2: _____ – _____ = _____
Answer: _____

g) A team loses 6 points each round for 3 rounds, then gains 12 bonus points.
→ Expression: (–6 × 3) + 12
→ Step 1: _____ × _____ = _____
→ Step 2: _____ + 12 = _____
Answer: _____

h) A diver goes –8 feet down each dive for 3 dives, then swims up 10 feet.
→ Expression: (–8 × 3) + 10
→ Step 1: _____ × _____ = _____
→ Step 2: _____ + 10 = _____
Answer: _____

PEMDAS REVIEW

- (–3 + 5) × 4 = _____
- 6 + (–2) × 3 = _____
- (–8 ÷ 2) + 5 = _____
- –4 + (–6 ÷ 3) = _____
- (–10 + 4) × (–2) = _____
- (–12 ÷ (–3)) + 6 = _____
- (8 – 10) × (–3) = _____
- –9 + 2 × (–4) = _____
- (–5 + 1) × (–3) + 2 = _____
- (–2 × 3) + (–4 ÷ 2) = _____

SOLVE STEP-BY-STEP

a) You lose $3 each day for 4 days, then earn $6.

a. (–3 × 4) + 6
b. (–3 + 4) × 6

b) A diver goes down 5 feet per dive for 3 dives, then rises 4 feet.

a. (–5 × 3) + 4
b. –5 + (3 × 4)

c) The temperature rises 2°C each hour for 5 hours, then drops 8°C.

a. 2 × (5 – 8)
b. (2 × 5) – 8

MIXED OPERATIONS REVIEW

SOLVE EACH PROBLEM

a 6 + (–3) × 2 = _____
b) (–8 ÷ 2) + 6 = _____
c) –5 + (–4) × (–2) = _____
d) (–10 + 3) × 2 = _____
e) 12 ÷ (–3) + 1 = _____
f) (–6 + –2) ÷ 2 = _____
g) –9 + 4 × 3 = _____
h) (–14 ÷ –2) – 5 = _____
i) (–4) × (–3) + 2 = _____
j) 7 – (–5) × 2 = _____

FILL IN THE MISSING STEP

a) (–6 + 2) × 3 = _____
Step 1: _____
Step 2: _____

b) 4 + –2 × –3 = _____
Step 1: _____
Step 2: _____

c) (–9 ÷ 3) – 1 = _____
Step 1: _____
Step 2: _____

WHICH COMES FIRST?

Write P for parentheses, M/D for multiply/divide, or A/S for add/subtract:

a) $-4 + (-2 \times 3)$
b) $(6 - 4) \times -2$
c) $-12 \div -3 + 1$

TRY THESE YOURSELF

a) You start with $10.
You spend $3 each day for 2 days.
Expression: $10 + (-3 \times 2)$
Step 1: _____ × _____ = _____
Step 2: 10 + _____ = _____
Answer: _____

b) You owe $12.
You pay back $4 each day for 2 days.
Expression: $-12 + (4 \times 2)$
Step 1: _____ × _____ = _____
Step 2: −12 + _____ = _____
Answer: _____

c) It drops 2° each hour for 4 hours, then rises 3°.
Expression: $(-2 \times 4) + 3$
Step 1: _____ × _____ = _____
Step 2: _____ + 3 = _____
Answer: _____

d) It rises 5°, then drops 3° each hour for 2 hours.
Expression: 5 + (–3 × 2)
Step 1: _____ × _____ = _____
Step 2: 5 + _____ = _____
Answer: _____

e) A hiker climbs 4 ft each step for 3 steps, then falls 5 ft.
Expression: (4 × 3) + (–5)
Step 1: _____ × _____ = _____
Step 2: _____ + (–5) = _____
Answer: _____

f) A diver goes –6 ft each dive for 2 dives, then rises 4 ft.
Expression: (–6 × 2) + 4
Step 1: _____ × _____ = _____
Step 2: _____ + 4 = _____
Answer: _____

g) (–3 × –4) + (–6 ÷ 2) = _____
Step 1: _____
Step 2: _____
Answer: _____

(–2 × –5) + (–9 ÷ 3) = _____
Step 1: _____
Step 2: _____
Answer: _____

SHOW EACH STEP

a) 6 + (–4 × 2) = _____
Step 1: _____
Step 2: _____

b) (–9 ÷ 3) + 7 = _____
Step 1: _____
Step 2: _____

c) –5 + 3 × (–2) = _____
Step 1: _____
Step 2: _____

d) (–8 + 2) × –3 = _____
Step 1: _____
Step 2: _____

CHOOSE THE CORRECT EXPRESSION

a) You lose $4 each day for 3 days, then earn $5.
a. (–4 × 3) + 5
b. –4 + (3 × 5)

b) The temperature rises 2° each hour for 4 hours, then drops 6°.
a. (2 × 4) – 6
b. 2 × (4 – 6)

Master decimals and percents with Confidence — The Fun, Visual Way!

Understanding Negative Numbers is a thoughtfully crafted workbook that makes learning negative operations approachable, visual, and engaging.
This book is perfect for:

- **Visual learners**
- **Students with special needs**
- **Struggling math students**
- **Homeschooling families and educators**

Through clear models, colorful number lines, real-life word problems, and creative challenges, this workbook builds deep understanding of key key math concepts one step at a time.