A DEFINITION	A.5 ADDI
A.1 COUNTING POSITIVE AND NEGATIVE NUMBERS	Ex 20: (+1)
Ex 1:	Ex 21: $(+0)$ Ex 22: $(+2)$
	Ex 22: $(+2)$ Ex 23: (-2)
	Ex 24: (-1)
Ex 2:	Ex 25: (+2)
Ex 3:	
	Ex 26: $(+3)$
E 4.	Ex 27: (-4)
	Ex 20: $($
	Ex 30: (
Ex 5:	Ex 31: (+2)
	A.7 FIND
	Fy 29. The
	Ex 32: The Ex 33: The
Ex 6: Positive two is	Ex 34: The
Ex 7: Negative three is	Ex 35: The
Ex 8: Negative four is	Ex 36: The
Ex 10: Negative two is	A.8 FIND
A.3 FINDING THE OPPOSITE	E 27. The
Ex 11: The opposite of -4 is $$.	Ex 37: The Ex 38: The
Ex 12: The opposite of -3 is	Ex 39: The
Ex 13: The opposite of $+5$ is	Ex 40: The
Ex 14: The opposite of $+1$ is	B RULE
Ex 15: The opposite of 0 is \square .	
A.4 FINDING THE OPPOSITE FOR DECIMAL	B.1 ADDI
NUMBERS	Ex 41: (+6)
Ex 16: The opposite of -4.1 is	Ex 42: (+4)
Ex 17: The opposite of -0.5 is	Ex 43: (-5)
Ex 18: The opposite of $+3.5$ is	Ex 44: (+6)

Ex 19: The opposite of +99.5 is

A.5 ADDING SMALL INTEGERS

(+1) + (-2) =
(+3) + (-1) =
(+2) + (-3) =
(-2) + (-1) =
(-1) + (+3) =
(+2) + (+3) =

A.6 FINDING MISSING NUMBERS IN ADDITION

Ex 26:	(+3) + () = +1
Ex 27:	(-4) + () = -2
Ex 28:	() + (+2) = -1
Ex 29:	(-2) + () = -5
Ex 30:	() + (+1) = +3
Ex 31:	(+2) + () = -3

A.7 FINDING THE ABSOLUTE VALUE



Ex 33: The absolute value of -3 is

Ex 34: The absolute value of +5 is

Ex 35: The absolute value of -4 is

Ex 36: The absolute value of -9 is

A.8 FINDING THE ABSOLUTE VALUE FOR DECIMAL NUMBERS

- **Ex 37:** The absolute value of -2.1 is
- **Ex 38:** The absolute value of -5.4 is
- **Ex 39:** The absolute value of 3.7 is

Ex 40: The absolute value of 0 is

B RULES OF ADDITION

B.1 ADDING INTEGERS

Ex 41:	(+6) + (-4) =
Ex 42:	(+4) + (+7) =
Ex 43:	(-5) + (+8) =
Ex 44:	(+6) + (-4) =
Ex 45:	(-5) + (-4) =

B.2 ADDING INTEGERS WITHOUT EXPLICIT SIGNS

Ex 46: 6 + (-4) =Ex 47: -5 + 8 =Ex 48: -2 + (-3) =Ex 49: -6 + 0 =B.3 ADDING SIGNED DECIMAL NUMBERS

Ex 50: -5 + 8.1 =Ex 51: -3 + (-2.5) =Ex 52: -1.6 + (+2.6) =Ex 53: -3.5 + (+1.5) =

B.4 ADDING MULTIPLE INTEGERS

Ex 54: Calculate:

$$(+3) + (-7) + (-5) =$$

Ex 55: Calculate:

$$(-2) + (-4) + (+7) =$$

Ex 56: Calculate:

$$(-2) + (+4) + (-2) =$$

Ex 57: Calculate:

(-10) + (+3) + (-7) =

B.5 ADDING INTEGERS IN REAL-WORLD PROBLEMS

Ex 58: During a hike, the hiker experiences altitude changes as follows. Positive numbers indicate climbing (gaining altitude), while negative numbers indicate descending (losing altitude):

- The hiker starts at an altitude of +300 meters.
- They climb +150 meters in the morning.
- In the afternoon, they descend by -200 meters.

What is the hiker's final altitude at the end of the day?

meters

Ex 59: A person keeps track of their bank account balance as follows. Positive numbers indicate deposits (money added), while negative numbers indicate withdrawals (money taken out):

- The person starts with +50 dollars in their account.
- They deposit +30 dollars.
- Later, they with draw -40 dollars.

What is the person's final balance?

dollars

Ex 60: In a round of golf, each hole has a "par" score, and a player's score is based on how many strokes they take compared to par. A score of 0 means the player made par, a positive number means they took extra strokes (over par), and a negative number means they made fewer strokes (under par).

- Hole 1: Par 3, player scored -1 (under par)
- Hole 2: Par 4, player scored +2 (over par)
- Hole 3: Par 5, player scored 0 (made par)
- Hole 4: Par 3, player scored +1 (over par)
- Hole 5: Par 4, player scored -2 (under par)

What is the player's total score?

Ex 61: Throughout the day, the temperature in a city changes as follows. Positive numbers indicate a rise in temperature, while negative numbers indicate a drop in temperature:

- In the morning, the temperature started at $+5^{\circ}C$ and dropped by $-3^{\circ}C$.
- In the afternoon, the temperature rose by $+4^{\circ}C$.
- In the evening, the temperature dropped again by -6° C.

 $^{\circ}C$

• At night, it dropped further by -1° C.

What is the temperature at the end of the day?

C SUBTRACTION

C.1 CONVERTING SUBTRACTION TO ADDITION

Ex 62: Convert the subtracting in addition:

$$(+4) - (+2) = () + ()$$

Ex 63: Convert the subtraction into addition:

$$(-5) - (-3) = () + ()$$

Ex 64: Convert the subtraction into addition:

$$(+4) - (-2) = () + ()$$

Ex 65: Convert the subtraction into addition:



C.2 SUBTRACTING INTEGERS STEP BY STEP

Ex 66: Calculate:

$$(+4) - (+2) = () + ()$$

Ex 67: Calculate:



(°±°)





Ex 69: Calculate:



C.3 SUBTRACTING INTEGERS

Ex 70: Calculate:

$$(+4) - (+2) =$$

Ex 71: Calculate:

(-2) - (-4) =

Ex 72: Calculate:

$$(+2) - (-3) =$$

Ex 73: Calculate:

$$(-3) - (+4) =$$

C.4 SUBTRACTING INTEGERS WITHOUT EXPLICIT SIGNS

Ex 74: Calculate:



Ex 75: Calculate:



Ex 76: Calculate:



Ex 77: Calculate:

3 - 5 =

C.5 ADDING/SUBTRACTING MULTIPLE INTEGERS

Ex 78: Calculate:

$$(+3) - (-7) - (+5) =$$

Ex 79: Calculate:

$$(-2) - (-3) + (-2) =$$

Ex 80: Calculate:

(-5) - (-4) + (-3) =

Ex 81: Calculate:

$$(+6) - (-3) + (-4) =$$

C.6 SUBTRACTING INTEGERS IN REAL-WORLD PROBLEMS

Ex 82: In the morning, the temperature was -7° C, and by the evening, the temperature was -2° C. Find the variation of temperature.



Ex 83: In the morning, your bank account balance was -50 dollars, and by the evening, it was +30 dollars. Find the change in your bank account balance.

dollars

Ex 84: A lift starts at the 5th floor and descends to the -2nd floor (below ground level).

Find the change in the lift's position.



Ex 85: he GDP (Gross Domestic Product) growth rate of a country was -2% in 2024. It was +3% in 2025. Find the variation in the GDP growth rate.

%

D ON THE NUMBER LINE

D.1 FINDING X ON THE NUMBER LINE

Ex 86: Find the value of x.



Ex 87: Find the value of x.



Ex 88: Find the value of x.



Ex 89: Find the value of x.

$$\begin{array}{c} x \\ -50 \\ x = \end{array}$$

Ex 90: Find the value of x.



Ex 91: Find the value of x.





D.2 FINDING DECIMAL NUMBERS ON THE NUMBER LINE

Ex 92: Find the value of x.

Ex 93: Find the value of x.



Ex 94: Find the value of x.



Ex 95: Find the value of x.



E ORDERING

E.1 COMPARING SMALL INTEGERS



E.2 COMPARING INTEGERS

 $\Box <$ **Ex 103:** Compare the numbers: $-20 \square > 1$ $\Box =$ $\Box <$ **Ex 104:** Compare the numbers: $-99 \square >$ -100 $\Box =$ $\Box <$ **Ex 105:** Compare the numbers: $234 \square >$ -1200 $\Box =$ $\Box <$ **Ex 106:** Compare the numbers: $-18 \square >$ -3 $\Box =$ $\Box <$ **Ex 107:** Compare the numbers: 230 \Box > 200 $\Box =$ $\Box <$ **Ex 108:** Compare the numbers: 99 $\square >$ -100 $\Box =$

E.3 COMPARING INTEGERS IN REAL-WORLD PROBLEMS

MCQ 109: During a golf tournament, the scores relative to par for five different holes were:

-2, -1, 0, +1, -3

Order these scores from the best performance (most under par) to the worst performance (above par). Choose one answer:

 $\Box \ 0 < +1 < -1 < -2 < -3$ $\Box \ -3 < -2 < -1 < 0 < +1$ $\Box \ +1 > 0 > -1 > -2 > -3$ $\Box \ -1 < -2 < -3 < 0 < +1$

Lake	Depth below sea level
Lake Assal, Djibouti	$-155 \mathrm{m}$
Death Valley, USA	-86 m
Caspian Sea, Central Asia	-28 m
Sea of Galilee, Israel	-214 m

MCQ 110: Given the depths of various lakes below sea level:

Which lake is the deepest below sea level? Choose one answer:

- \Box Lake Assal, Djibouti
- $\hfill\square$ Death Valley, USA
- $\Box\,$ Caspian Sea, Central Asia
- \Box Sea of Galilee, Israel

 $\binom{0}{\underline{+}}$

 \mathbf{MCQ} 111: The recorded temperatures in a particular week were:

 $-2.5^{\circ}{\rm C}, 1.2^{\circ}{\rm C}, -0.8^{\circ}{\rm C}, 0.5^{\circ}{\rm C}, -3.2^{\circ}{\rm C}$

Order these temperatures from coldest to warmest. Choose one answer:

$$\label{eq:C} \begin{split} \square \ 1.2^{\circ}\mathrm{C} < 0.5^{\circ}\mathrm{C} < -0.8^{\circ}\mathrm{C} < -2.5^{\circ}\mathrm{C} \\ \square \ -3.2^{\circ}\mathrm{C} < -2.5^{\circ}\mathrm{C} < -0.8^{\circ}\mathrm{C} < 0.5^{\circ}\mathrm{C} < 1.2^{\circ}\mathrm{C} \\ \square \ 1.2^{\circ}\mathrm{C} > 0.5^{\circ}\mathrm{C} > -0.8^{\circ}\mathrm{C} > -3.2^{\circ}\mathrm{C} \\ \square \ -0.8^{\circ}\mathrm{C} < -2.5^{\circ}\mathrm{C} < -3.2^{\circ}\mathrm{C} < 0.5^{\circ}\mathrm{C} < 1.2^{\circ}\mathrm{C} \end{split}$$

MCQ 112: Given the years of significant events in Ancient Roman history:

Event	Year
Founding of Rome	-753
End of the Roman Republic	-27
Sacking of Rome by the Gauls	-390
Julius Caesar's assassination	-44

Which event happened the earliest? Choose one answer:

- $\hfill\square$ Founding of Rome
- $\hfill\square$ End of the Roman Republic
- $\hfill\square$ Sacking of Rome by the Gauls
- $\hfill\square$ Julius Caesar's assass
ination

