



ST. MARY'S CO-ED SCHOOL, HARDA

[2020-21]

CLASS- VI

SUBJECT- MATHS

CHAPTER- 4

INTEGERS

EXERCISE – 4.A

1. Write the opposite of each of the following:

- (i) An increase of 8
- (ii) A loss of ₹ 7
- (iii) Gaining a weight of 5 kg
- (iv) 10 km above sea level
- (v) 5°C below the freezing point
- (vi) A deposit of ₹ 100
- (vii) Earning ₹ 500
- (viii) Going 6 km to the east
- (ix) 24 (x) -34

Solutions

The opposite statements

- (i) The opposite statement of an increase of 8 is a decrease of 8
- (ii) The opposite statement of a loss of ₹ 7 is a gain of ₹ 7
- (iii) The opposite statement of gaining a weight of 5 kg is losing a weight of 5 kg
- (iv) The opposite statement of 10 km above sea level is 10 km below sea level
- (v) The opposite statement of 5°C below the freezing point is 5°C above the freezing point
- (vi) The opposite statement of a deposit of ₹ 100 is a withdrawal of ₹ 100

- (vii) The opposite statement of earning a ₹ 500 is spending ₹ 500
(viii) The opposite statement of going 6 km to the east is going 6 km to the west
(ix) The opposite of 24 is -24
(x) The opposite of -34 is 34

2. Indicate the following using “+” or “-” sign:

- (i) A gain of ₹ 600
(ii) A loss of ₹ 800
(iii) 7°C below the freezing point
(iv) Decrease of 9
(v) 2 km above sea level
(vi) 3 km below sea level
(vii) A Deposit of ₹ 200
(viii) A withdrawal of ₹ 300

Solutions

- (i) A gain of rupees 600 indicates +₹ 600
(ii) A loss of rupees 800 indicates -₹ 800
(iii) 7°C below the freezing point indicates -7°C
(iv) Decrease of 9 indicates -9
(v) 2 Km above sea level indicates +2 km
(vi) 3 km below sea level indicates -3 km
(vii) A deposit of rupees 200 indicates +₹ 200
(viii) A withdrawal of rupees 300 indicates -₹ 300

3. Mark the following integers on a number line:

(i) -5

(ii) -2

(iii) 0

(iv) 7

(v) -13

Solutions

(i) Here -5 lies on the left side of the 0 on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5

(ii) Here -2 lies on the left side of the 0 on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5



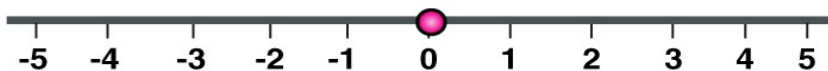
(ii) Here -2 lies on the left side of the 0 on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5



(iii) Here 0 lies in the center on the number line

-5 -4 -3 -2 -1 0 1 2 3 4 5



4. Which number is larger in each of the following pairs?

- (i) 0, -2
- (ii) -3, -5
- (iii) -5, 2
- (iv) -16, 8
- (v) -365, -913
- (vi) -888, 8

Solutions

(i) Since 0 is greater than every negative integer

Hence 0 is greater than -2

(ii) Since 3 is less than 5

Hence -3 is greater than -5

(iii) Since every positive integer is greater than negative integer

Hence 2 is greater than -5

(iv) Since every positive integer is greater than negative integer

Hence 8 is greater than -16

(v) Since 365 is less than 913

Hence -365 is greater than -913

(vi) Since every positive integer is greater than negative integer

Hence 8 is greater than -888

5. Which number is smaller in each of the following pairs?

- (i) 6, -7
- (ii) 0, -1
- (iii) -13, -27
- (iv) -26, 17
- (v) -317, -603
- (vi) -777, 7

Solutions

- (i) -7 is less than 6
- (ii) -1 is less than 0
- (iii) -27 is less than -13
- (iv) -26 is less than 17
- (v) -603 is less than -317
- (vi) -777 is less than 7

6. Write all integers between

- (i) 0 and 6 (ii) -5 and 0 (iii) -3 and 3 (iv) -7 and -5

Solutions

- (i) 1, 2, 3, 4 and 5 are the integers between 0 and 6
- (ii) -4, -3, -2, -1 are the integers between -5 and 0
- (iii) -2, -1, 0, 1, and 2 are the integers between -3 and 3
- (iv) -6 is the integer between -7 and -5

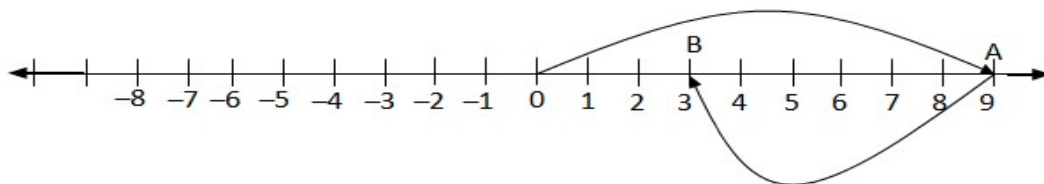
EXERCISE – 4. B

Q.1: Use the number line and add the following integers:

- (i) $9 + (-6)$

ANSWER:

i) On the number line, we start from 0 and move 9 steps to the right to reach a point A. Now, starting from A, we move 6 steps to the left to reach point B.



B represents the integer 3.

$$\therefore 9 + (-6) = 3$$

2. Fill in the blanks:

(i) $(-3) + (-9) = \dots\dots\dots$

(ii) $(-7) + (-8) = \dots\dots\dots$

(iii) $(-9) + 16 = \dots\dots\dots$

(iv) $(-13) + 25 = \dots\dots\dots$

(v) $8 + (-17) = \dots\dots\dots$

(vi) $2 + (-12) = \dots\dots\dots$

Solutions

(i) $(-3) + (-9) = -12$

(ii) $(-7) + (-8) = -15$

(iii) $(-9) + 16 = 7$

(iv) $(-13) + 25 = 12$

(v) $8 + (-17) = -9$

(vi) $2 + (-12) = -10$

3. Add:

(i) $\begin{array}{r} -365 \\ -87 \\ \hline \end{array}$

(ii) $\begin{array}{r} -73 \\ -687 \\ \hline \end{array}$

(iii) $\begin{array}{r} -1065 \\ -987 \\ \hline \end{array}$

(iv) $\begin{array}{r} -3596 \\ -1089 \\ \hline \end{array}$

Solutions

$$\begin{array}{r} \text{(i)} \quad -365 \\ \quad - 87 \\ \hline \quad - 452 \end{array}$$

$$\begin{array}{r} \text{(ii)} \quad - 73 \\ \quad - 687 \\ \hline \quad - 760 \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad - 1065 \\ \quad - 987 \\ \hline \quad - 2052 \end{array}$$

$$\begin{array}{r} \text{(iv)} \quad -3569 \\ \quad -1089 \\ \hline \quad -4685 \end{array}$$

4. Add:

$$\begin{array}{r} \text{(i)} \quad - 206 \\ \quad + 98 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(ii)} \quad + 178 \\ \quad - 69 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iii)} \quad - 103 \\ \quad + 312 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(iv)} \quad -493 \\ \quad +289 \\ \hline \end{array}$$

Solutions

$$\begin{array}{r} \text{(i)} - 206 \\ + 98 \\ \hline - 108 \end{array}$$

$$\begin{array}{r} \text{(ii)} +178 \\ - 69 \\ \hline 109 \end{array}$$

$$\begin{array}{r} \text{(iii)} - 103 \\ + 312 \\ \hline 209 \end{array}$$

$$\begin{array}{r} \text{(iv)} -493 \\ +289 \\ \hline - 204 \end{array}$$

5. Find the sum of

(i) 137 and -354

(ii) 1001 and -13

(iii) -3057 and 199

(iv) -36 and 1027

(v) -389 and -1032

(vi) -36 and 100

(vii) 3002 and -888

(viii) -18 , $+25$ and -37

(ix) -312 , 39 and 192

(x) -51 , -203 , 36 and -28

Solutions

$$\text{(i)} 137 + (-354) = -217$$

-217 is the sum of 137 and -354

$$\text{(ii)} 1001 + (-13) = 988$$

988 is the sum of 1001 and -13

(iii) $-3057 + 199 = -2858$

-2858 is the sum of -3057 and 199

(iv) $-36 + 1027 = 991$

991 is the sum of -36 and 1027

(v) $-389 + (-1032) = -1421$

-1421 is the sum of -389 and -1032

(vi) $-36 + 100 = 64$

64 is the sum of -36 and 100

(vii) $3002 + (-888) = 2114$

2114 is the sum of 3002 and -888

(viii) $-18 + 25 + (-37) = -30$

-30 is the sum of -18, +25 and -37

(ix) $-312 + 39 + 192 = -81$

-81 is the sum of -312, 39 and 192

(x) $36 + (-51) + (-203) + (-28)$

$36 + (-51 - 203 - 28)$

$36 + (-282)$

$36 - 282 = -246$

-246 is the sum of -51, -203, 36 and -28

6. Find the additive inverse of

(i) -57

(ii) 183

(iii) 0

(iv) -1001

(v) 2054

Solutions

(i) $-57 + 57 = 0$

Hence, the additive inverse of -57 is 57

(ii) $183 - 183 = 0$

Hence, the additive inverse of 183 is -183

(iii) $0 = 0$

The additive inverse of 0 is 0

(iv) $-1001 + 1001 = 0$

Hence, the additive inverse of -1001 is 1001

(v) $2054 - 2054 = 0$

Hence, the additive inverse of 2054 is -2054

Exercise – 4. C

1. Subtract:

(i) 18 from -34

(ii) -15 from 25

(iii) -28 from -43

(iv) 68 from -37

(v) 219 from 0

(vi) -92 from 0

(vii) -135 from -250

(viii) -2768 from -287

(ix) 6240 from -271

(x) -3012 from 6250

Solutions

(i) $-34 - 18 = -52$

(ii) $25 - (-15) = 25 + 15 = 40$

(iii) $-43 - (-28) = -43 + 28 = -15$

(iv) $-37 - 68 = -105$

(v) $0 - 219 = -219$

(vi) $0 - (-92) = 92$

(vii) $-250 - (-135) = -250 + 135 = -115$

(viii) $-287 - (-2768) = -287 + 2768 = 2481$

(ix) $-271 - (6240) = -6511$

(x) $6250 - (-3012) = 6250 + 3012 = 9262$

2. Subtract the sum of -1050 and 813 from -23

Solutions

Finding the sum of -1050 and 813

$$-1050 + 813 = -237$$

Subtracting the sum of -1050 and 813 i.e -237 from -23

We get

$$-23 - (-237) = -23 + 237$$

$$= 214$$

3. Subtract the sum of -250 and 138 from the sum of 136 and -272

Solution

To find the sum of -250 and 138

$$-250 + 138 = -112$$

To find the sum of 136 and -272

$$136 + (-272) = 136 - 272$$

$$= -136$$

Subtracting the sum of -250 and 138 from sum of 136 and -272

$$-136 - (-112) = -136 + 112$$

$$= -24$$

4. From the sum of 33 and -47 , Subtract -84

Solution

Finding the sum of 33 and -47

$$33 + (-47) = 33 - 47$$

$$= -14$$

Subtracting -84 from -14

$$-14 - (-84) = -14 + 84 = 70$$

5. Add -36 to the difference of -8 and -68

Solution

Finding the difference of -8 and -68

$$-8 - (-68) = -8 + 68$$

$$= 60$$

Now add -36 to 60

$$-36 + 60 = 24$$

6. Simplify:

(i) $[37 - (-8)] + [11 - (-30)]$

(ii) $[-13 - (-17)] + [-22 - (-40)]$

Solutions

(i) $[37 - (-8)] + [11 - (-30)] = (37 + 8) + (11 + 30)$

$$= 45 + 41$$

$$= 86$$

(ii) $[-13 - (-17)] + [-22 - (-40)] = (-13 + 17) + (-22 + 40)$

$$= 4 + 18$$

$$= 22$$

Exercise 4D

1. Multiply:

(i) 15 by 9

(ii) 18 by -7

(iii) 29 by -11

(iv) -18 by 13

(v) -56 by 16

(vi) 32 by -21

(vii) -57 by 0

(viii) 0 by -31

(ix) -12 by -9

(x) -746 by -8

(xi) 118 by -7

(xii) -238 by -143

Solutions

(i) Multiplying 15 by 9

$$15 \times 9 = 135$$

(ii) Multiplying 18 by -7

$$18 \times (-7) = -126$$

(iii) Multiplying 29 by -11

$$29 \times (-11) = -319$$

(iv) Multiplying -18 by 13

$$-18 \times 13 = -234$$

(v) Multiplying -56 by 16

$$-56 \times 16 = -896$$

(vi) Multiplying 32 by -21

$$32 \times (-21) = -672$$

(vii) Multiplying -57 by 0

$$-57 \times 0 = 0$$

(viii) Multiplying 0 by -31

$$0 \times (-31) = 0$$

(ix) Multiplying -12 by -9

$$(-12) \times (-9) = 108$$

(x) Multiplying -746 by -8

$$-746 \times (-8) = 5968$$

(xi) Multiplying 118 by -7

$$118 \times (-7) = -826$$

(xii) Multiplying by -238 by -143

$$-238 \times (-143) = 34034$$



2. Find the products:

(i) $(-2) \times 3 \times (-4)$

(ii) $2 \times (-5) \times (-6)$

(iii) $(-8) \times 3 \times 5$

(iv) $8 \times 7 \times (-10)$

(v) $(-3) \times (-7) \times (-6)$

(vi) $(-8) \times (-3) \times (-9)$

Solutions

(i) $(-2) \times 3 \times (-4) = [(-2) \times 3] \times (-4)$

$= (-6) \times (-4)$

$= 24$

(ii) $2 \times (-5) \times (-6) = [2 \times (-5)] \times (-6)$

$= (-10) \times (-6)$

$= 60$

(iii) $(-8) \times 3 \times 5 = [-8 \times 3] \times 5$

$= (-24) \times 5$

$= -120$

(iv) $8 \times 7 \times (-10) = [8 \times 7] \times (-10)$

$= 56 \times (-10)$

$= -560$

(v) $(-3) \times (-7) \times (-6) = [(-3) \times (-7)] \times (-6)$

$= 21 \times (-6)$

$= -126$

(vi) $(-8) \times (-3) \times (-9) = [(-8) \times (-3)] \times (-9)$

$= 24 \times (-9)$

$= -216$

3. Use convenient groupings and find the values of

(i) $18 \times (-27) \times 30$

(ii) $(-8) \times (-63) \times 9$

(iii) $(-17) \times (-23) \times 41$

(iv) $(-51) \times (-47) \times (-19)$

Solutions

(i) $18 \times (-27) \times 30 = (-27) \times [18 \times 30]$

$= (-27) \times 540$

$= -14580$

(ii) $(-8) \times (-63) \times 9 = [(-8) \times (-63)] \times 9$

$= 504 \times 9$

$= 4536$

(iii) $(-17) \times (-23) \times 41 = [(-17) \times (-23)] \times 41$

$= 391 \times 41$

$= 16031$

(iv) $(-51) \times (-47) \times (-19) = [(-51) \times (-47)] \times (-19)$

$= 2397 \times (-19)$

$= -45543$

Exercise 4E

1. Divide:

(i) 85 by -17

(ii) -72 by 18

(iii) -80 by 16

(iv) -121 by 11

(v) 108 by -12

(vi) -161 by 23

(vii) -76 by -19

(viii) -147 by -21

(ix) -639 by -71

(x) -15625 by -125

Solutions

(i) $85 \div (-17) = 85/-17 = -5$

(ii) $-72 \div 18 = -72/18 = -4$

(iii) $-80 \div 16 = -80/16 = -5$

(iv) $-121 \div 11 = -121/11 = -11$

(v) $108 \div (-12) = 108/-12 = -9$

(vi) $-161 \div 23 = -161/23 = -7$

(vii) $-76 \div (-19) = -76/-19 = 4$

(viii) $-147 \div (-21) = -147/-21 = 7$

(ix) $-639 \div (-71) = -639/-71 = 9$

(x) $-15625 \div (-125) = -15625/-125 = 125$

