

Exercise 5.3

Negative Numbers and Integers – Exercise – 5.3 – Q.1

Ans.

(i) Additive inverse of 52 is -52.

(ii) 176

(iii) 0

(iv) -1

Negative Numbers and Integers – Exercise – 5.3 – Q.2

Ans.

(i) Success - or - 42 is $= - 42 + (-1)$

$$= 1 - 42$$

$$= - 41$$

(ii) $-1 + 1 = 0$

(iii) $0 + 1 = 1$

(iv) $- 200 + 1 = -199$

(v) $- 99 + 1 = -98.$

Negative Numbers and Integers – Exercise – 5.3 – Q.3

Ans.

(i) predecessor of 0 is $\Rightarrow 0 - 1 = -1$

(ii) $1 - 1 = 0$

(iii) $-1 - 1 = -2$

(iv) $-125 - 1 = -126$

(v) $1000 - 1 = 999$

Negative Numbers and Integers – Exercise – 5.3 – Q.4

Ans.

(i) True

- (ii) False
- (iii) False
- (iv) False
- (v) False

Negative Numbers and Integers – Exercise – 5.3 – Q.5

Ans.

Integers whose absolute values less than 5 are

- 4, - 3, - 2, - 1, 0, 1, 2, 3, 4.

Negative Numbers and Integers – Exercise – 5.3 – Q.6

Ans.

- (i) True
- (ii) False
- (iii) True
- (iv) True



Negative Numbers and Integers – Exercise – 5.3 – Q.7

Ans.

+	- 6	- 4	- 2	0	2	4	6
6	0	2	4	6	8	10	12
4	- 2	0	2	4	6	8	10
2	- 4	- 2	0	2	4	6	8
0	- 6	-4	- 2	4	2	4	6
- 2	- 8	-6	- 4	- 2	0	2	4
- 4	- 10	-8	- 6	- 4	- 2	0	2
- 6	- 12	-10	- 8	- 6	- 4	- 2	0

(i) (+6, -6), (4, -4), (3, -3), (2, -2), (1, -1), (0, 0)

(ii) yes by commutativity of Addition

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

(iii) By existence of additive identity

$$0 + (-6) = -6 [\because 0 + a = a]$$

Negative Numbers and Integers – Exercise – 5.3 – Q.8

Ans.

$$(i) x + 1 = 0$$

$$\Rightarrow x + 1 - 1 = 0 - 1 \text{ [subtract } \because \text{ on both sides]}$$

$$\Rightarrow x = -1$$

$$(ii) x + 5 = 0$$

$$x + 5 - 5 = 0 - 5$$

$$x + 0 = -5$$

$$\Rightarrow x = -5$$

$$(iii) -3 + x = 0$$

$$3 - 3 + x = 0 + 3$$

$$x = 3$$

$$(iv) x + (-8) = 0$$

$$x - 8 = 0$$

$$x - 8 + 8 = 0 + 8$$

$$x = 8$$

$$(v) 7 + x = 0$$

$$\Rightarrow 7 + x - 7 = 0 - 7$$

$$\Rightarrow x = -7$$

$$(vi) x + 0 = 0$$

$$x = 0.$$

