Negative Numbers and Integers Ex 5.3 Q1

Answer :

The additive inverse of the number a is the number added to a, yields zero. So, we find the following:

(i) 52 + (−52) = 0

Here, −52 is the additive inverse of 52.

(ii) (−176) + 176 = 0

Here, 176 is the additive inverse of −176.

(iii) 0 + 0 = 0

Here, 0 itself is its inverse.

(iv) 1 + (−1) = 0

Here, −1 is the additive inverse of 1.

Negative Numbers and Integers Ex 5.3 Q2

Answer :

For the integer a, $a + 1$ will be its successor.

(i) −41 is the successor of −42.

(ii) 0 is the successor of −1.

(iii) 1 is the successor of 0.

(iv) −199 is the successor of 200.

(v) −98 is the successor of −99.

Negative Numbers and Integers Ex 5.3 Q3

Answer :

For the integer a, the predecessor is $(a - 1)$.

(i) −1 is the predecessor of 0.

(ii) 0 is the predecessor of 1.

(iii) −2 is the predecessor of −1.

(iv) −126 is the predecessor of −125.

(v) 999 is the predecessor of 1000.

Negative Numbers and Integers Ex 5.3 Q4

Answer :

(i) True – It is the definition of additive inverse; for example, 5 + (−5) = 0.

(ii) False – For example, −2 − 3 = −5; it is a negative integer.

(iii) False – −3 + 5 = 2; it is a positive integer.

(iv) False – 0 is the successor of −1.

(v) False – It can be zero like (−2) + (−1) + (3).

********** END **********