EXERCISE 1.2 PAGE: 9

1. Write down a pair of integers whose:

(a) sum is -7

Solution:-

= - 4 + (-3)

= - 4 – 3 … [∵ (+ × - = -)]

= - 7

(b) difference is – 10

Solution:-

= -25 - (-15)

= - 25 + 15 … [∵ (- × - = +)]

= -10

(c) sum is 0

Solution:-

= 4 + (-4)

= 4 – 4

= 0

2. (a) Write a pair of negative integers whose difference gives 8

Solution:-

= (-5) – (- 13)

= -5 + 13 … [∵ (- × - = +)]

= 8

(b) Write a negative integer and a positive integer whose sum is – 5.

Solution:-

= -25 + 20

= -5

(c) Write a negative integer and a positive integer whose difference is – 3.

Solution:-

= - 2 – (1)

= - 2 - 1

= - 3

3. In a quiz, team A scored – 40, 10, 0 and team B scored 10, 0, – 40 in three successive rounds. Which team scored more? Can we say that we can add integers in any order?

Solution:-

From the question, it is given that

Score of team A = -40, 10, 0

Total score obtained by team A = - 40 + 10 + 0

= - 30

Score of team B = 10, 0, -40

Total score obtained by team B = 10 + 0 + (-40)

= 10 + 0 – 40

= - 30

Thus, the score of the both A team and B team is same.

Yes, we can say that we can add integers in any order.

4. Fill in the blanks to make the following statements true:

(i) (–5) + (– 8) = (– 8) + (.....)

Solution:-

Let us assume the missing integer be x,

Then,

= (–5) + (– 8) = (– 8) + (x)

= - 5 – 8 = - 8 + x

= - 13 = - 8 + x

By sending – 8 from RHS to LHS it becomes 8,

= - 13 + 8 = x

= x = - 5

Now substitute the x value in the blank place,

–5) + (– 8) = (– 8) + (- 5) … [This equation is in the form of Commutative law of Addition]

(ii) –53 + ... = –53

Solution:-

Let us assume the missing integer be x,

Then,

= –53 + x = –53

By sending – 53 from LHS to RHS it becomes 53,

= x = -53 + 53

= x = 0

Now substitute the x value in the blank place,

= –53 + 0 = –53 … [This equation is in the form of Closure property of Addition]

(iii) 17 + ... = 0

Solution:-

Let us assume the missing integer be x,

Then,

= 17 + x = 0

By sending 17 from LHS to RHS it becomes -17,

= x = 0 - 17

= x = - 17

Now substitute the x value in the blank place,

= 17 + (-17) = 0 … [This equation is in the form of Closure property of Addition]

= 17 – 17 = 0

(iv) [13 + (– 12)] + (.....) = 13 + [(–12) + (–7)]

Solution:-

Let us assume the missing integer be x,

Then,

= [13 + (– 12)] + (x) = 13 + [(–12) + (–7)]

= [13 – 12] + (x) = 13 + [–12 –7]

= [1] + (x) = 13 + [-19]

= 1 + (x) = 13 – 19

= 1 + (x) = -6

By sending 1 from LHS to RHS it becomes -1,

= x = -6 – 1

= x = -7

Now substitute the x value in the blank place,

= [13 + (– 12)] + (-7) = 13 + [(–12) + (–7)] … [This equation is in the form of Associative property of Addition]

(v) (– 4) + [15 + (–3)] = [– 4 + 15] +.....

Solution:-

Let us assume the missing integer be x,

Then,

= (– 4) + [15 + (–3)] = [– 4 + 15] + x

= (– 4) + [15 – 3)] = [– 4 + 15] + x

= (-4) + [12] = [11] + x

= 8 = 11 + x

By sending 11 from RHS to LHS it becomes -11,

= 8 – 11 = x

= x = -3

Now substitute the x value in the blank place,

= (– 4) + [15 + (–3)] = [– 4 + 15] + -3 … [This equation is in the form of Associative property of Addition]