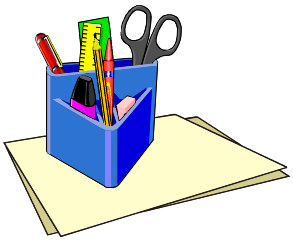
Activity 13



Objective

To subtract integers

Material Required

Coloured square paper, adhesive, white sheet, ruler, pen/pencil.

Method of Construction

Make different squares of two different colours, say red and blue.

Demonstration

 represents +1

 represents –1

1. To find: 2 – 3 

Fig. 1

(i) To subtract 3 from 2, take 2 red squares (Fig.1). Try to cross 3 red squares from it. But there are only 2 red squares, so to cross three, we add one red and one blue as shown in Fig. 2.

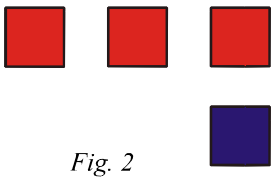


Fig. 2

(ii) Now cross three red squares. Count the number and colour of squares left (Fig. 3).

One blue square is left.

So, 2 – 3 = –1. [It is same as doing 2 + (–3)].

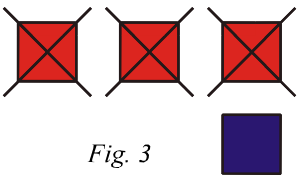


Fig. 3

2. To find: –2 – (–4)

(i) To subtract –4 from –2, take 2 blue squares (Fig. 4) and try to cross 4 blue squares from it. But there are only two blue squares, so add two blue and two red squares as shown in Fig. 5

Fig. 4

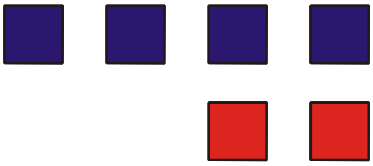


Fig. 5

(ii) Cross blue squares from them and count the number of squares left along with their colour (Fig.6).

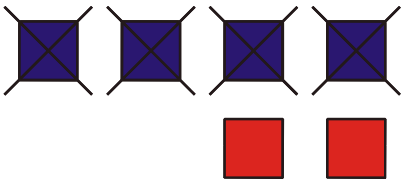


Fig. 6

There are two red squares left.

So, –2 – (–4) = + 2. [It is same as doing –2 + (4)].

3. To find: 3 – (–7)

(i) To subtract –7 from 3 take 3 red squares and add 7 blue and 7 red squares as shown below (Fig. 7).

(ii) Cross seven blue squares.

Count the number of squares left alongwith their colour.

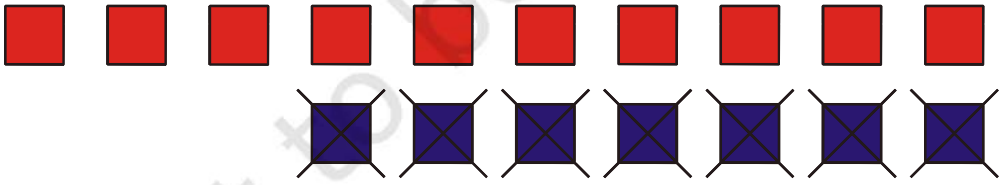


Fig. 7

There are 10 red squares left.

So, 3 – (–7) = 10. [It is same as doing 3 + 7].

4. To find: –2 – (5)

(i) To subtract 5 from –2, take 2 blue squares and add 5 blue squares and 5 red squares (Fig. 8). Cross five red squares.

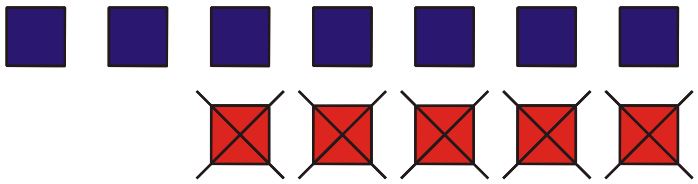


Fig. 8

(ii) Now count the number of squares left alongwith their colour. There are 7 blue squares left.

So, –2 – (5) = –7. [It is same as doing –2 + (–5)].

Thus, to subtract integer b from an integer a, add additive inverse of b to a. That is, $a - b = a + (-b)$.

Observation

Complete the table.

Integers			
a	***b***	***a – b***	***a – b =***
2	–3	2 – 3	–1
–2	–4	–2 – (–4)	+2
3	–7	3 – (–7)	10
2	–5	...	...
–3	5	...	...
–2	–7	...	...

Application

This activity can be used to demonstrate subtraction of integers.