

6. Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positive integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?



Q:- 6

Solⁿ:-

Given, Distance from A to B = 20 km
 Distance from B to C = 30 km

So, Distance from A to C = $20 - 30 = -10$ km

Thus, Rita's final position from A is -10 km

7. In a magic square each row, column and diagonal have the same sum. Check which of the following is a magic square.

5	-1	-4
-5	-2	7
0	3	-3

(i)

1	-10	0
-4	-3	-2
-6	4	-7

(ii)

Soln :- (7)

(i)

5	-1	-4
-5	-2	7
0	3	-3

(ii)

1	-10	0
-4	-3	-2
-6	4	-7

For magic square each row, column and diagonal have the same sum.

(i) Row wise \rightarrow

$$5 + (-1) + (-4) = 5 - 1 - 4 = 5 - 5 = 0$$

$$-5 + (-2) + 7 = -5 - 2 + 7 = -7 + 7 = 0$$

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

Column wise \rightarrow

$$5 + (-5) + 0 = 5 - 5 + 0 = 0 + 0 = 0$$

$$-1 + (-2) + 3 = -1 - 2 + 3 = -3 + 3 = 0$$

$$-4 + 7 + (-3) = -4 + 7 - 3 = 7 - 7 = 0$$

Diagonal \rightarrow

$$5 + (-2) + 3 = 5 - 2 - 3 = 5 - 5 = 0$$

$$0 + (-2) + (-4) = 0 - 2 - 4 = 0 - 6 = \textcircled{-6}$$

So, this box is not a magic box because all the sums are not equal.

(ii) \rightarrow Do yourself (Home work).

8. Verify $a - (-b) = a + b$ for the following values of a and b .

(i) $a = 21, b = 18$

(ii) $a = 118, b = 125$

(iii) $a = 75, b = 84$

(iv) $a = 28, b = 11$

Solⁿ :- (8)

$$\boxed{a - (-b) = a + b}$$

(i) $a = 21, b = 18$

So,

$$21 - (-18) = 21 + 18$$

$$21 + 18 = 39$$

$$\boxed{39 = 39}$$



Hence verified.

(ii) $a = 118, b = 125$

So,

$$118 - (-125) = 118 + 125$$

$$118 + 125 = 243$$

$$\boxed{243 = 243}$$

Hence verified.

(iii) and (iv) \rightarrow

Home work

9. Use the sign of $>$, $<$ or $=$ in the box to make the statements true.

- | | | |
|-------------------------|--------------------------|----------------------|
| (a) $(-8) + (-4)$ | <input type="checkbox"/> | $(-8) - (-4)$ |
| (b) $(-3) + 7 - (19)$ | <input type="checkbox"/> | $15 - 8 + (-9)$ |
| (c) $23 - 41 + 11$ | <input type="checkbox"/> | $23 - 41 - 11$ |
| (d) $39 + (-24) - (15)$ | <input type="checkbox"/> | $36 + (-52) - (-36)$ |
| (e) $-231 + 79 + 51$ | <input type="checkbox"/> | $-399 + 159 + 81$ |

Solⁿ:-

(a) $(-8) + (-4)$ $(-8) - (-4)$
 $-8 - 4$ $-8 + 4$
 -12 -4
 $\therefore -12$ -4
 So, $(-8) + (-4)$ $(-8) - (-4)$

(b) $(-3) + 7 - (19)$ $15 - 8 + (-9)$
 $-3 + 7 - 19$ $15 - 8 - 9$
 $7 - 22$ $15 - 17$
 -15 -2
 $\therefore -15$ -2
 So, $(-3) + 7 - (19)$ $15 - 8 + (-9)$

(c) $23 - 41 + 11$ $23 - 41 - 11$
 $34 - 41$ $23 - 52$
 -7 -29
 $\therefore -7$ -29
 So, $23 - 41 + 11$ $23 - 41 - 11$

(d) and (e) \Rightarrow Home work.