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1. Determine each of the following products:
(i) 12 × 7
(ii) (-15) × 8
(iii) (-25) × (-9)
(iv) 125 × (-8)
Solution:
(i) Given 12 × 7
Here we have to find the products of given numbers
12 ×7 = 84
Because the product of two integers of like signs is equal to the product of their absolute values.

(ii) Given (-15) × 8
Here we have to find the products of given numbers
(-15) ×8 = -120
Because the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

(iii) Given (-25) × (-9)
Here we have to find the products of given numbers
(-25) × (-9) = + (25 ×9) = +225
Because the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

(iv) Given 125 × (-8)
Here we have to find the products of given numbers
125 × (-8) = -1000
Because the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

2. Find each of the following products:
(i) 3 × (-8) × 5
(ii) 9 × (-3) × (-6)
(iii) (-2) × 36 × (-5)

(iv) (-2) × (-4) × (-6) × (-8)

Solution:

(i) Given 3 × (-8) ×5

Here we have to find the product of given number.

3 × (-8) × 5 = 3 × (-8 × 5)

=3 × -40 = -120

Since the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

(ii) Given 9 × (-3) × (-6)

Here we have to find the product of given number.

9 × (-3) × (-6) = 9 × (-3 × -6) [∵ the product of two integers of like signs is equal to the product of their absolute values.]

=9 × +18 = +162

(iii) Given (-2) × 36 × (-5)

Here we have to find the product of given number.

(-2) × 36 × (-5) = (-2 × 36) × -5 [∵ the product of two integers of like signs is equal to the product of their absolute values.]

=-72 × -5 = +360

(iv) Given (-2) × (-4) × (-6) × (-8)

Here we have to find the product of given number.

(-2) × (-4) × (-6) × (-8) = (-2 × -4) × (-6 × -8) [∵ the product of two integers of like signs is equal to the product of their absolute values.]

=-8 × -48 = +384

3. Find the value of:

(i) 1487 × 327 + (-487) × 327

(ii) 28945 × 99 – (-28945)

Solution:

(i) Given 1487 × 327 + (-487) × 327

By using the rule of multiplication of integers, we have

1487 × 327 + (-487) × 327 = 486249 – 159249

Since the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

=327000

(ii) Given 28945 × 99 – (-28945)
By using the rule of multiplication of integers, we have
28945 × 99 – (-28945) = 2865555 + 28945
Since the product of two integers of like signs is equal to the product of their absolute values.
=2894500

4. Complete the following multiplication table:

Second number

First number	**x**	**-4**	**-3**	**-2**	**-1**	**0**	**1**	**2**	**3**	**4**
	-4									
	-3									
	-2									
	-1									
	0									
	1									
	2									
	3									
	4									

Is the multiplication table symmetrical about the diagonal joining the upper left corner to the lower right corner?

Solution:

Second number

First number	x	-4	-3	-2	-1	0	1	2	3	4
	-4	16	12	8	4	0	-4	-8	-12	-16
	-3	12	9	6	3	0	-3	-6	-9	-12
	-2	8	6	4	2	0	-2	-4	-6	-8
	-1	4	3	2	1	0	-1	-2	-3	-4
	0	0	0	0	0	0	0	0	0	0
	1	-4	-3	-2	-1	0	1	2	3	4
	2	-8	-6	-4	-2	0	2	4	6	8
	3	-12	-9	-6	-3	0	3	6	9	12
	4	-16	-12	-8	-4	0	4	8	12	16

From the table it is clear that, the table is symmetrical about the diagonal joining the upper left corner to the lower right corner.

5. Determine the integer whose product with '-1' is

(i) 58
(ii) 0
(iii) -225
Solution:
(i) Given 58
Here we have to find the integer which is multiplied by -1
We get, 58 × -1 = -58
Since the product of two integers of opposite signs is equal to the additive inverse of the product of their absolute values.

(ii) Given 0
Here we have to find the integer which is multiplied by -1
We get, 0 × -1 = 0 [because anything multiplied with 0 we get 0 as their result]

(iii) Given -225
Here we have to find the integer which is multiplied by -1
We get, -225 × -1 = 225
Since the product of two integers of like signs is equal to the product of their absolute values.