



Multiplication

Learning Outcomes

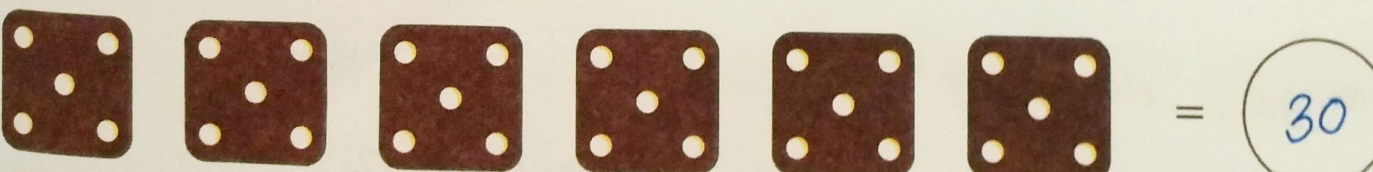
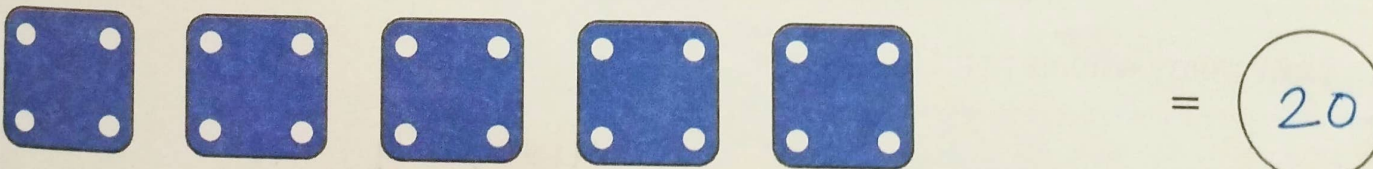
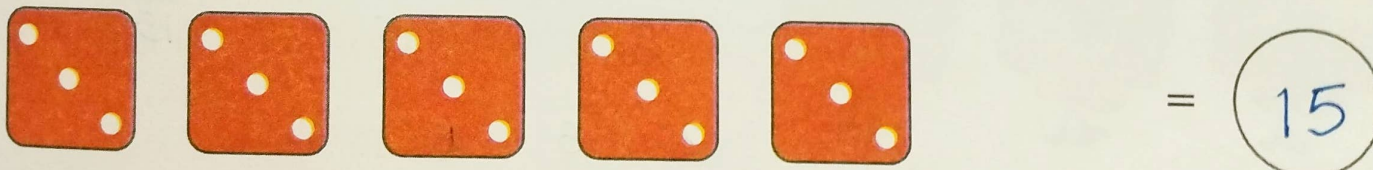
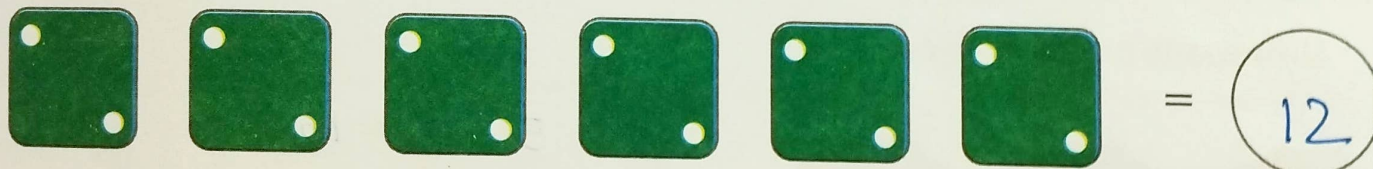
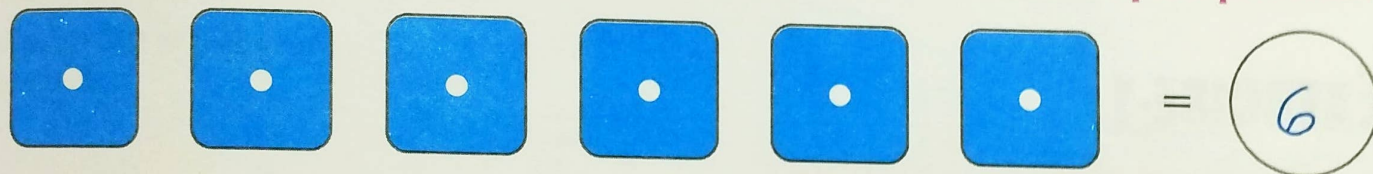
After completing this chapter, the students will be able to :

- ☐ multiply on the number line.
- ☐ describe and apply the properties of multiplication.
- ☐ construct and use the multiplication tables.
- ☐ multiply 2-digit number by 1-digit number without and with carry over.
- ☐ multiply 3-digit number by 1-digit number without carry over.
- ☐ solve daily life problems based on multiplication.

Warm Up



Count the dots on dice in each row and write the total number in the space provided.



MULTIPLICATION AS REPEATED ADDITION

Parul has 6 baskets. She puts 3 apples in each basket.



Total number of apples = $3 + 3 + 3 + 3 + 3 + 3 = 18$

We say that, there are 6 groups of 3 apples.

6 groups of 3 = 18

We write it as $6 \times 3 = 18$

We read it as 'six times three is equal to eighteen'.

The numbers 6 and 3 are **multiplicand** and **multiplier** respectively and 18 is the **product**.

' $\times$ ' is the sign of multiplication.



When a number is added again and again, it is called **repeated addition**.

Multiplication is repeated addition of the same number.

Use Cordova Smart Class Software on the smart board in class to do all the Exercises.

EXERCISE-1

(According to NEP Guidelines)
(Understanding)

Observe the pictures and fill in the blanks.

1. How many petals in all?



$$5 + 5 + 5 = 15$$

$$3 \text{ groups of } 5 \text{ petals} = 15 \text{ petals}$$

$$3 \times 5 = 15 \text{ petals}$$

2. How many wheels in all?



$$4 + 4 + 4 = 12$$

$$3 \text{ groups of } 4 \text{ wheels} = 12 \text{ wheels}$$

$$3 \times 4 = 12 \text{ wheels}$$

Multiplication Table of 6

	1 time 6 is 6.	$1 \times 6 = 6$	$6 \times 1 = 6$
	2 times 6 is 12.	$2 \times 6 = 12$	$6 \times 2 = 12$
	3 times 6 is 18.	$3 \times 6 = 18$	$6 \times 3 = 18$
	4 times 6 is 24.	$4 \times 6 = 24$	$6 \times 4 = 24$
	5 times 6 is 30.	$5 \times 6 = 30$	$6 \times 5 = 30$
	6 times 6 is 36.	$6 \times 6 = 36$	$6 \times 6 = 36$
	7 times 6 is 42.	$7 \times 6 = 42$	$6 \times 7 = 42$
	8 times 6 is 48.	$8 \times 6 = 48$	$6 \times 8 = 48$
	9 times 6 is 54.	$9 \times 6 = 54$	$6 \times 9 = 54$
	10 times 6 is 60.	$10 \times 6 = 60$	$6 \times 10 = 60$

Colour every sixth number starting from 6.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

Multiplication Table of 7

	1 time 7 is 7.	$1 \times 7 = 7$	$7 \times 1 = 7$
	2 times 7 is 14.	$2 \times 7 = 14$	$7 \times 2 = 14$
	3 times 7 is 21.	$3 \times 7 = 21$	$7 \times 3 = 21$
	4 times 7 is 28.	$4 \times 7 = 28$	$7 \times 4 = 28$
	5 times 7 is 35.	$5 \times 7 = 35$	$7 \times 5 = 35$
	6 times 7 is 42.	$6 \times 7 = 42$	$7 \times 6 = 42$
	7 times 7 is 49.	$7 \times 7 = 49$	$7 \times 7 = 49$
	8 times 7 is 56.	$8 \times 7 = 56$	$7 \times 8 = 56$
	9 times 7 is 63.	$9 \times 7 = 63$	$7 \times 9 = 63$
	10 times 7 is 70.	$10 \times 7 = 70$	$7 \times 10 = 70$

Colour every seventh number starting from 7.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

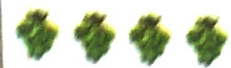
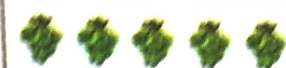
Multiplication Table of 8

	1 time 8 is 8.	$1 \times 8 = 8$	$8 \times 1 = 8$
	2 times 8 is 16.	$2 \times 8 = 16$	$8 \times 2 = 16$
	3 times 8 is 24.	$3 \times 8 = 24$	$8 \times 3 = 24$
	4 times 8 is 32.	$4 \times 8 = 32$	$8 \times 4 = 32$
	5 times 8 is 40.	$5 \times 8 = 40$	$8 \times 5 = 40$
	6 times 8 is 48.	$6 \times 8 = 48$	$8 \times 6 = 48$
	7 times 8 is 56.	$7 \times 8 = 56$	$8 \times 7 = 56$
	8 times 8 is 64.	$8 \times 8 = 64$	$8 \times 8 = 64$
	9 times 8 is 72.	$9 \times 8 = 72$	$8 \times 9 = 72$
	10 times 8 is 80.	$10 \times 8 = 80$	$8 \times 10 = 80$

Colour every eighth number starting from 8.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

Multiplication Table of 9

	1 time 9 is 9.	$1 \times 9 = 9$	$9 \times 1 = 9$
	2 times 9 is 18.	$2 \times 9 = 18$	$9 \times 2 = 18$
	3 times 9 is 27.	$3 \times 9 = 27$	$9 \times 3 = 27$
	4 times 9 is 36.	$4 \times 9 = 36$	$9 \times 4 = 36$
	5 times 9 is 45.	$5 \times 9 = 45$	$9 \times 5 = 45$
	6 times 9 is 54.	$6 \times 9 = 54$	$9 \times 6 = 54$
	7 times 9 is 63.	$7 \times 9 = 63$	$9 \times 7 = 63$
	8 times 9 is 72.	$8 \times 9 = 72$	$9 \times 8 = 72$
	9 times 9 is 81.	$9 \times 9 = 81$	$9 \times 9 = 81$
	10 times 9 is 90.	$10 \times 9 = 90$	$9 \times 10 = 90$

Colour every ninth number starting from 9.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90

Quick Maths



Observe the following :

$1 \times 10 = 10$	$2 \times 10 = 20$	$3 \times 10 = 30$	$4 \times 10 = 40$	$5 \times 10 = 50$
$6 \times 10 = 60$	$7 \times 10 = 70$	$8 \times 10 = 80$	$9 \times 10 = 90$	$10 \times 10 = 100$

To multiply a number by 10, put a zero to the right of the number.

EXERCISE-3

(According to NEP Guidelines)
(Understanding)

1. Choose the correct answer.

(a)

9×7

36	16	63 ✓
----	----	------

(b)

7×8

78	56 ✓	36
----	------	----

(c)

8×6

48 ✓	86	14
------	----	----

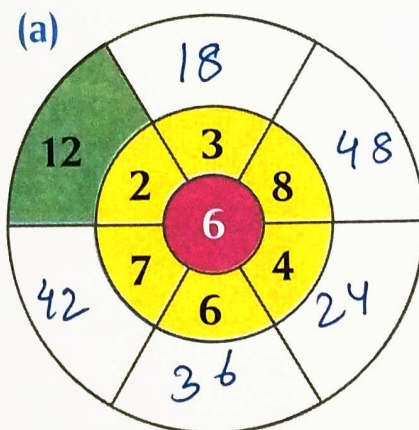
(d)

8×9

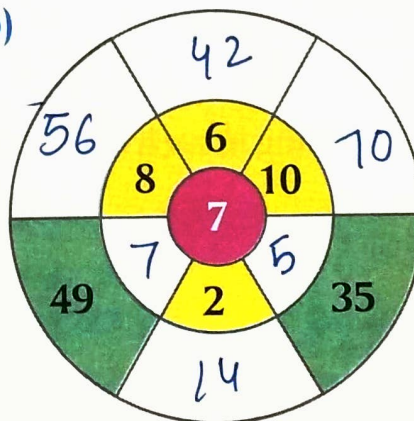
72 ✓	17	62
------	----	----

2. Complete the multiplication facts :

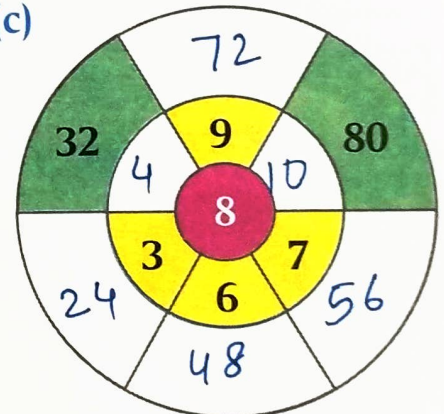
(a)



(b)



(c)



3. Fill in the blanks :

(a)

46×10

=

460

(b)

23×10

=

230

(c)

85×10

=

850

(d)

57×10

=

570

EXERCISE-4

(According to NEP Guidelines)
(Understanding)

Fill in the boxes :

1. $6 \times 9 = 9 \times \boxed{6}$

2. $8 \times \boxed{0} = 0$

3. $5 \times \boxed{1} = 5$

4. $12 \times 1 = \boxed{12}$

5. $9 \times \boxed{3} = 3 \times 9$

6. $0 \times 2 = \boxed{0}$

7. $\boxed{0} \times 11 = 0$

8. $9 \times 1 = \boxed{9}$

9. $1 \times 7 = \boxed{7} \times 1$

10. $3 \times \boxed{1} = 3$

11. $4 \times \boxed{7} = 7 \times 4$

12. $10 \times \boxed{1} = 10$

13. $11 \times 8 = 8 \times \boxed{11}$

14. $15 \times 1 = \boxed{15}$

Puzzle



(Critical Thinking)

Understand the pattern and fill in the missing number.

