CLASS: III   SUBJECT: Maths

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Pre- activity :-

Let's Begin

Yug, look at this picture of a farm. The farmer grows different vegetables in this farm.

Yes, Darsh. I have listed the vegetables planted in this farm.

Farm	
Vegetables	**Planted in**
beans	4 rows of 6
carrots	2 rows of 8
cauliflowers	5 rows of 9
beetroot	4 rows of 12

1 Use the information given in the table to answer the following questions.

a Circle the plant that is more in number.

    i. carrots   ii. beetroots   iii. cauliflowers   iv. beans

b The number of beetroot plants is 2 times the number of bean plants.

c How many carrot plants are there in all? If there are 2 leaves on each carrot plant, then find the total number of leaves. 32

2 The farmer wants to plant 3 rows of 6 tomato plants in each row.

How many tomato plants will he plant in all? 18

Concrete Stage

Use 'Dienes Blocks/Counters' to represent the multiplication statements, and fill in the empty boxes.

a) $4 \times 5 = \boxed{5} \times 4$

b) $\boxed{1} \times \boxed{7} = 7$

c) $\boxed{5} \times \boxed{0} = 0$

Pictorial Stage

Look at the given images, and write a multiplication sentence for each.

a)

$\boxed{5} \times \boxed{7} = \boxed{35}$

There are $\boxed{35}$ tomatoes altogether.

b)

$\boxed{7} \times \boxed{8} = \boxed{56}$

There are $\boxed{56}$ legs in all.

c)

$\boxed{9} \times \boxed{3} = \boxed{27}$

There are $\boxed{27}$ blades in all.

d)
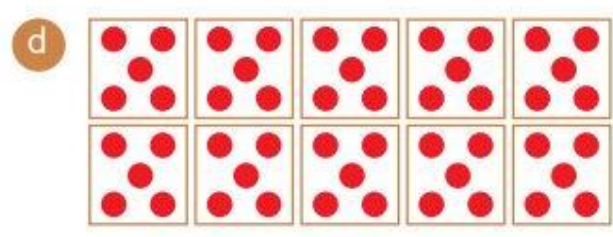
$\boxed{10} \times \boxed{5} = \boxed{50}$

There are $\boxed{50}$ dots altogether.

Abstract Stage

1 Write True / False for each multiplication sentence.

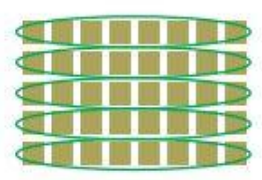a) $9 \times 4 = 4 \times 9$ __True__

b) $7 \times 0 = 7$ __False__

c) $13 \times 1 = 13$ __True__

2 Yug made this array to show that $\boxed{8} \times \boxed{5} = \boxed{40}$.

Darsh says that it is $\boxed{5} \times \boxed{8} = \boxed{40}$.

Is Darsh correct? Draw an array to explain your answer.

Yes, Darsh is correct.

Concrete Stage

Use 'Dienes Blocks' to find the products.

a) $\boxed{8} \times \boxed{10} = \boxed{80}$ There are $\boxed{8}$ tens altogether.

b) $\boxed{37} \times \boxed{10} = \boxed{370}$ There are $\boxed{3}$ hundreds and $\boxed{7}$ tens altogether.

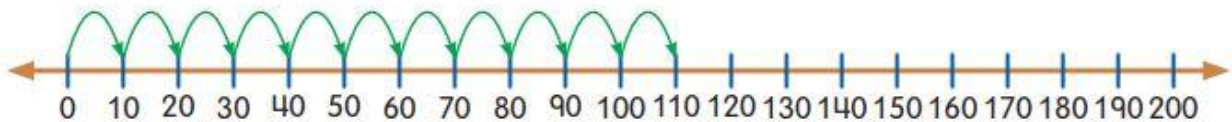## Pictorial Stage

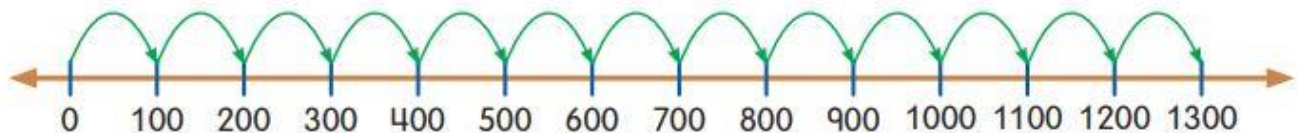1. Draw pictures to represent the given numbers and complete the multiplication sentences.

a) $5 \times 10 = \underline{50}$ b) $6 \times 100 = \underline{600}$ c) $13 \times 10 = \underline{130}$

2. Find the products.

a) $11 \times 10 = \underline{110}$

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

b) $13 \times 100 = \underline{1300}$

0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300

Abstract Stage

Item	Cost
Corn Soup	₹ 10
Fruit Salad	₹ 100

1. Refer the given price list, and use place value method to solve the following.

a) Tanisha needs 41 bowls of Corn Soup. How much money will she pay?

i. $41 \times ₹10 = ₹\underline{410}$

ii. $41 \times 1 \text{ ten} = \underline{41}$ tens

iii. $41 \text{ tens} = \underline{4}$ hundreds and $\underline{1}$ ten

b Tinu's father orders 4 plates of Fruit Salad. How much will he pay?

i. $4 \times ₹100 = ₹$ __400__

ii. 4 times 1 hundred = __4__ hundreds

iii. 4 hundreds = __4__ hundreds and __0__ tens

2 Yug's class bought 6 packs of sweets for a school celebration. Each pack has 100 sweets. If 100 sweets were left over, how many packs of sweets were used for the party.

Answer: Total number of sweets in 6 packs = 6 packs × 100 sweets
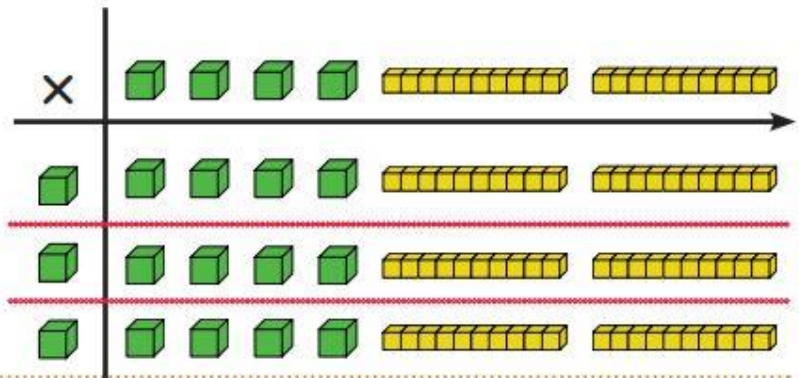
= 600 sweets

Number of packs used for the party

= Total number of sweets – Sweets left over

= 600 sweets – 100 sweets

= 500 sweets

Therefore, 500 sweets were used for the party, which corresponds to 5 packs of sweets.
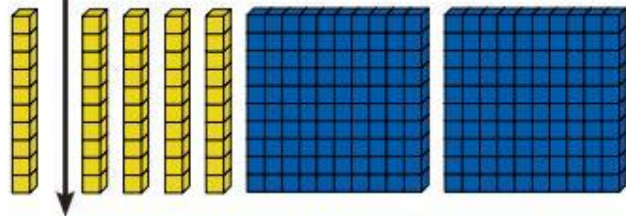
Multiply 13 and 24 using Dienes blocks.

$$\boxed{13} \times \boxed{24} = \boxed{?}$$

Step 1: Multiply 24 by ones.

Step 2: Multiply 24 by tens.

Step 3: Put all the Dienes blocks together and regroup them, if required. Finally, add them.

Hence,

$$\boxed{13} \times \boxed{24}$$

$$= \boxed{312}$$

Concrete Stage

Use 'Dienes Blocks', and shade the 'Square Grid' to find the products of the following, and write in the space provided.

a) $18 \times 20 = 360$

b) $34 \times 12 = 408$

c) $30 \times 20 = 600$

d) $10 \times 10 = 100$

Pictorial Stage

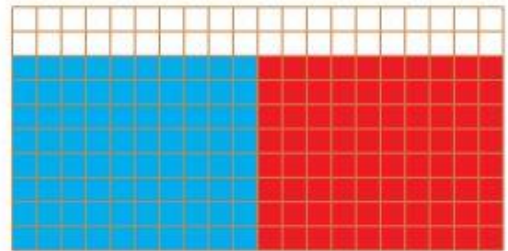1. Observe the picture, write the multiplication statement, and find its product.

   3 groups of 50 = 3 × 50 = 150

2. Sam shades this diagram to find the product of 8 and 20. Help him to work out.

   $8 \times 10 + 8 \times 10$

   $80 + 80 = 160$

   The product of 8 and 20 is ___160___.
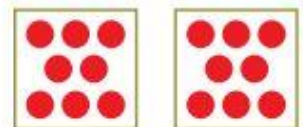
Abstract Stage

1. Tim made a model of 2 equal groups of pears. Write a multiplication sentence to show the total number of pears.

   There are 2 groups of 8 pears in each group.

   There are 16 pears in all.

2 Meera made orange juice. She arranged 3 glasses in each of 6 trays. Draw a bar model to show the total number of glasses of orange juice.

Answer: $3 \times 6 = 18$

3 Tanya, Leena, Sam, and Mansi each brought 28 grapes to make squash. How many grapes are there in all? Explain. Use a bar model to find the product.

Answer: $4 \times 28 = 112$ grapes.

Worksheet 6.2

Linking Chain EVS

Every human needs energy. Energy is measured in calorie. Daily calorie requirement needs to be met. We need to monitor our calorie intake. Here is a calorie chart for some vegetables, it is easy to count the calories in food that you eat.

S. No.	Vegetables	Measurement (in g/cup)	Energy (in calories)
1.	Cucumber	100	16
2.	Cabbage	90	22
3.	Cauliflower	107	27
4.	Tomatoes	180	36
5.	Carrots	128	53
6.	Peas	145	118
7.	Corn	150	177

Study the table, and answer the following questions.

a To gain 106 calories we need to have ___2___ cups of carrots.

b Naren ate 3 cups of peas. Calculate the calories gained by him.
$3 \times 118 = 354$ calories

c Two cups of cucumber has 4 calories less than 1 cup of ___tomatoes___.

d Draw a number line and calculate the calories intake of Diya in 2 days. She had 1 cup of cabbage and 1 cup of cauliflower for 2 days. 98

Blooming Questions

1 A plant has only 1 flower. Write a multiplication sentence to show how many flowers are there on 9 such plants.

$$9 \times 1 = 9$$ There are __9__ flowers in total.

2 Tina and her mother made cupcakes. They put 3 cupcakes on each of 8 plates. Tick the number sentences that show all the cupcakes.

a) $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 24$ ✓

b) $3 + 8 = 11$ ✗   c) $3 \times 3 = 9$ ✗

d) $8 + 8 + 8 = 24$ ✗   e) $8 \times 3 = 24$ ✓

3 Use the multiplication tables to complete the following. The first one has been done for you.

a) Multiply by 12.

Multiplicand	Product
0	0
1	12
2	24
4	48
5	60

b) Multiply by 13.

Multiplicand	Product
0	0
2	26
4	52
6	78
7	91

c) Multiply by 14.

Multiplicand	Product
0	0
3	42
6	84
9	126
10	140

d) Multiply by 15.

Multiplicand	Product
0	0
1	15
4	60
6	90
8	120

4 Write True or False for each sentence.

a) $3 \times 7 = 7 \times 3$ is an example that depicts the commutative property of multiplication. __True__

b) The multiplication statement $5 \times 7 = 5$ shows the identity property of multiplication. __False__

c) Zero property is shown in $0 \times 7 = 0$. __True__

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5 Find the products using column method.

a $15 \times 8 = 120$

b $13 \times 7 = 91$

c $23 \times 12 = 276$

d $18 \times 18 = 324$

e $69 \times 7 = 483$

f $17 \times 37 = 629$

6 A chef is making 25 batches of potato salad. He needs 10 cups of dressing for each salad. How many cups of dressing does he need? Answer: 250 cups

7 Gagan collected 24 cherries from his garden. He arranged these in groups of 6. Draw and represent the other way that Gagan could arrange using the commutative property of multiplication. Answer: 4×6, 6×4, 12×2, 2×12

8 Sanya is making square with toothpicks. She uses 4 toothpicks for each square. She makes 15 squares. How many toothpicks does she use? Use bar model to solve this problem. Answer: $15 \times 4 = 60$

9 Kanha is making 6 bowls of vegetable salads. He wants to put 13 pieces of cucumber and 9 pieces of carrots in each bowl. How many pieces of carrots and cucumbers does he need for the salad? Draw a model to find the answer.
Answer: Carrots = $6 \times 9 = 54$, Cucumbers = $6 \times 13 = 78$

10 Draw a picture and use words to explain the commutative property of multiplicat with the numbers 9 and 10. Answer: 9×10 / 10×9

11 Aamir fried 15 potatoes. To fry each potato he took 8 minutes, how long di take to fry 15 potatoes? Answer: $15 \times 8 = 120$ minutes

Mental Maths

Fill in the boxes with correct answers.

a $6 \times 10 = 60$

b $123 \times 1 = 123$

c $34 \times 100 = 3400$

d $12 \times 10 = 120$

e $65 \times 4 = 260$

f $11 \times 20 = 220$

g $19 \times 23 = 437$

h $10 \times 100 = 1000$

Post Activity:-

1. What are the factors of 9?

Solution:

The factors of 9 are the numbers which when multiplied together results in the number 9.

Thus,

$1 \times 9 = 9$

$3 \times 3 = 9$

$9 \times 1 = 9$

Hence, the factors of 9 are 1, 3 and 9.

2. What is the sum of factors of 12?

Solution:

The factors of 12 can be found as follows:

$1 \times 12 = 12$ or $12 \times 1 = 12$

$2 \times 6 = 12$ or $6 \times 2 = 12$

$3 \times 4 = 12$ or $4 \times 3 = 12$

Hence, the factors of 12 are 1, 2, 3, 4, 6, 12.

Therefore, the sum of factors of 12 = 1 + 2 + 3 + 4 + 6 + 12 = 28.

3. Find the common factors of 30 and 45.

Solution:

The factors of 30 are **1**, 2, **3**, **5**, 6, 10, **15** and 30

The factors of 45 are **1**, **3**, **5**, 9, **15** and 45

Hence, the common factors of 30 and 45 are 1, 3, 5, and 15.

4. What is the greatest common factor of 3 and 15.

Solution:

The factors of 3 are 1 and **3**.

The factors of 15 are 1, **3**, 5 and 15.

Therefore, the greatest common factor of 3 and 15 is 3.

Subject Teacher   HOD   COORDINATOR   PRINCIPAL