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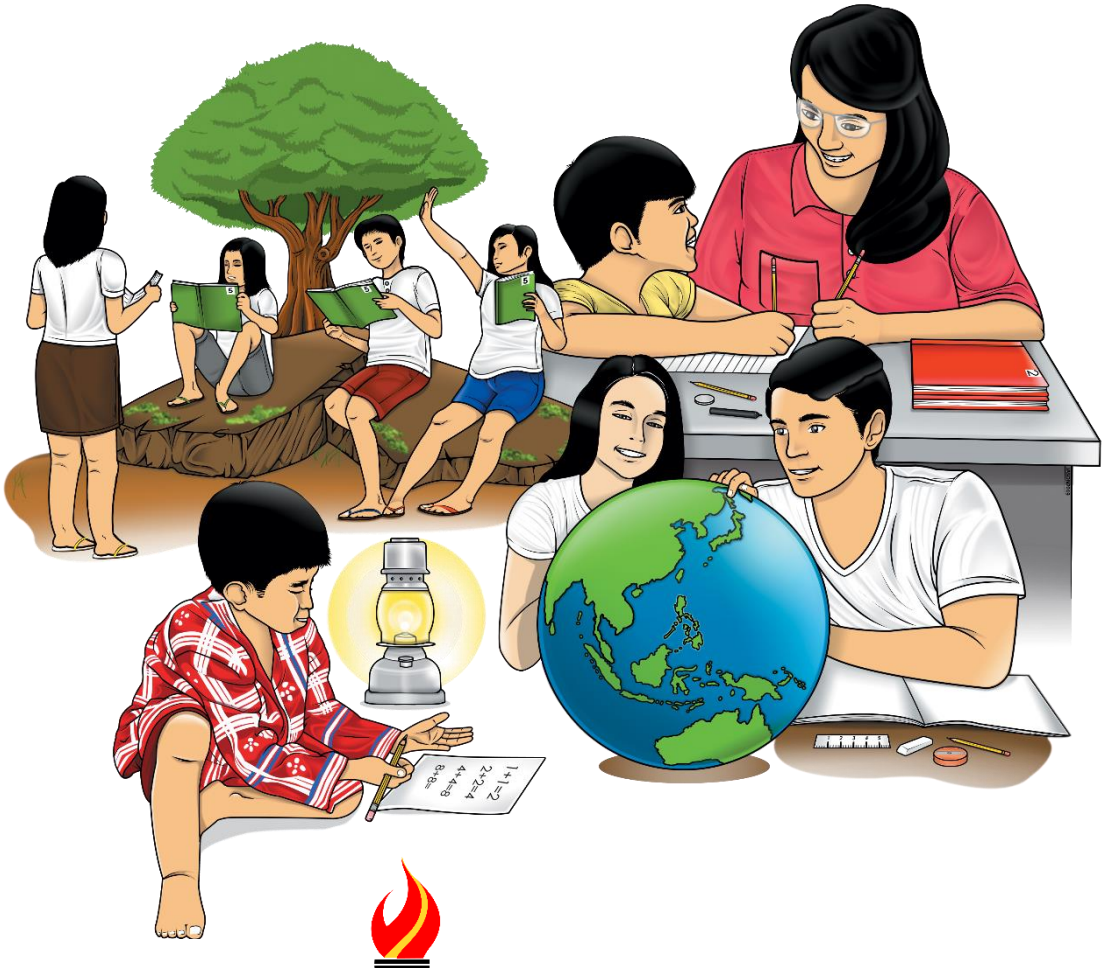
DEPARTMENT OF EDUCATION

Mathematics

Quarter 2 – Module 2:
Visualizing and Stating Basic Multiplication Facts



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Mathematics

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Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.

What I Need to Know

This module was designed and written with you in mind. It is here to help you master on visualizing and stating basic multiplication facts for numbers up to 10. The scope of this module permits it to be used in many different learning situations. The language used recognizes your diverse vocabulary backgrounds. The lessons are arranged to follow the standard sequence of the course but the order in which you read them can be changed to correspond with the Mathematics Grade 3 learning materials you are using.

After going through this module, you are expected to:

- Visualize and state basic multiplication facts for numbers up to 10 (M3NS-IIa-41.3)

Enjoy your journey. Good luck!

What I Know

Study the multiplication table below and write the missing number.

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3		5			8	9	
2				8		12				20
3	3		9			18	21		27	30
4				16	20		28		36	
5	5	10	15	20	25		35			
6						36		48	54	60
7				28	35		49	56		
8	8	16	24			48	56	64		
9	9	18						72	81	90
10	10		30		50	60			90	

Lesson 1 Visualizing and Stating Basic Multiplication Facts

Children like you are fond of reading and writing numbers using the four fundamental operations that could be very useful in daily life. In this module, you will learn how to visualize and state basic multiplication facts for numbers up to 10.

What's In

Give the multiplication sentence for the given phrases.

1. 3 rows of 2 _____
2. 2 rows of 6 _____
3. 4 sets of 5 _____
4. 6 sets of 7 _____
5. 9 groups of 4 _____

What's New

Answer the basic facts in multiplication. Use the multiplication table as your guide.

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

1. 6 x 2 = _____

2. 4 x 5 = _____

3. 9 x 9 = _____

4. 4 x 4 = _____

5. 8 x 8 = _____

6. 4 x 7 = _____

7. 3 x 3 = _____

8. 2 x 5 = _____

9. 6 x 7 = _____

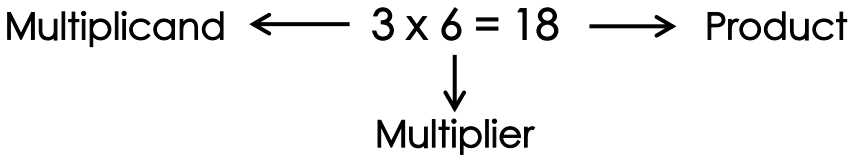
10. 10 x 4 = ____

What is It

In the previous lesson we already learned the following:

Multiplication is one of the four elementary mathematical operations. The multiplication of whole numbers may be thought as a repeated addition.
Multiplier tells the number of times a number is to be added or the number of groups.
Multiplicand is the number to be added or the number of elements in a set.
Product is the result of multiplication.

Multiplication sentence:



3 × 6 = 18 is also called a **multiplication fact**.
This process 3 x 6 = 18 is the multiplication process.
The symbol or sign 'x' is the sign of multiplication.

In this module, you will learn the basic multiplication facts:

A. Zero Property of Multiplication. Any number multiplied by zero is zero.
Example:

3 x 0 = 0 10 x 0 = 0 0 x 1 = 0

B. Identity Property of Multiplication. Any number multiplied by one is the number itself.

Example:

5 x 1 = 5 1 x 1 = 1 10 x 1 = 10

C. Multiplication is a repeated addition.

Example:

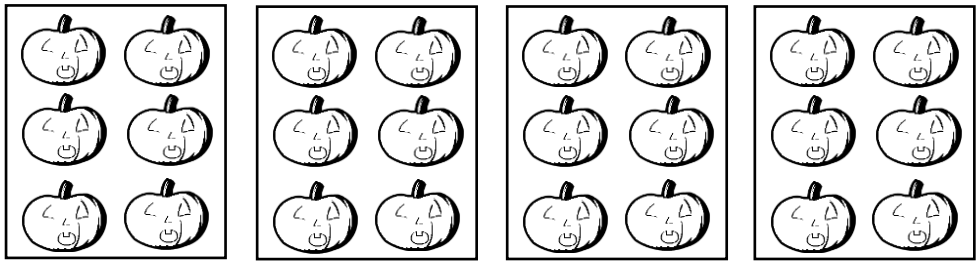
6 x 4 =?

To get the product of 6 x 4, follow the steps:

Step 1. Interpret the phrase 6 x 4 into groupings.

6 x 4 means "4 groups of 6".

Step 2. Visualize the groupings.



Step 3. Interpret the visualization into a repeated addition.

6 + 6 + 6 + 6 = 24

Step 4. State the multiplication fact.

6 x 4 = 24

D. Commutative Property of Multiplication states that when multiplicand and multiplier is interchanged, there will be the same product.

Example:

- 6 x 7 = 42 can also be written as 7 x 6 = 42
- 5 x 9 = 9 x 5 = 45
- "3 groups of 8" is equal to "8 groups of 3"

E. When a number is multiplied by 10, the product is found by writing a zero after the number.

Example:

- 2 x 10 = 20
- 10 x 7 = 70
- 10 x 10 = 100

What's More

Give the product using the basic multiplication facts.

A. Zero Property of Multiplication

1. 0
   x 5

2. 2 x 0 = _____

B. Identity Property of Multiplication

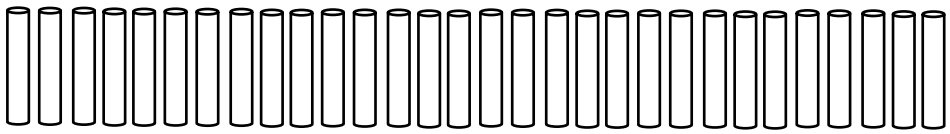
3. 6
   x 1

4. 1 x 7 = ___

C. Multiplication is a repeated addition

5. Visualize 5 x 6 using sticks and give the product.

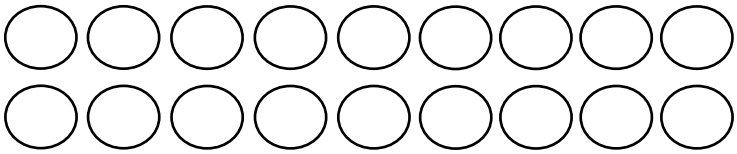
   5 x 6 = ____



6. Visualize 2 x 9 using discs and give the product.

   Repeated Addition Sentence: _____

   2 x 9 = ____



D. Commutative Property of Multiplication

7. 6 x 9 = 54, 9 x 6 = ____

8. 8 x 7 = ___, 7 x 8 = 56

E. When a number is multiplied by 10, the product is found by writing a zero after the number.

9. 5 x 10 = ____

10. 10 x 9 = ____

What I Have Learned

The basic multiplication facts:

1. Any number multiplied by zero is zero.
2. Any number multiplied by one is the number itself.
3. When a number is multiplied by 10, the product is found by writing a zero after the number.
4. When multiplicand and multiplier is interchanged, the product is the same.
5. Multiplication is a repeated addition.

How to multiply numbers?

Step 1. Interpret the multiplication phrase into groupings.
Step 2. Visualize the groupings.
Step 3. Interpret the visualization into a repeated addition.
Step 4. State the multiplication fact.

What I Can Do

Give the product.

1. 1 x 6 = ___

2. 0 x 9 = ___

3. 3 x 10 = ___

Visualize and use repeated addition to find the product.

4. 6 x 6 = _____
   Visualize here:
   Addition Equation: _____

5. 4 x 8 = _____
   Visualize here:
   Addition Equation: _____

Assessment

Visualize using sticks and complete the basic multiplication fact.

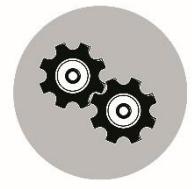
1. 8 x 5 = ____

2. 4 x 9 = ____

3. 2 x 7 = ____

4. 10 x 3 = ____

5. 9 x 1 = ____



Additional Activities

Supply the missing numbers.

1. 5 x _____ = 5

2. 6 x _____ = 0

3. _____ x 4 = 40

4. 3 x 2 = _____ x 3 = 6

5. 4 x 8 = 4 + 4 + 4 + 4 + 4 + 4 + 4 + _____

6. 9 x 6 means "_____ groups of 9"

7. 10 x _____ = 100

8. _____ x 10 = 60

9. _____ x 7 = 7

10. 5 x 6 means "add 5 repeatedly for _____ times"

Answer Key

What's More

1. 0
2. 0
3. 6
4. 7
5. 6 groups of 5
   5 x 6 = 30
6. 9 groups of 2
   2 x 9 = 18
7. 54
8. 56
9. 50
10. 90

What's In

1. 3 x 2 = 6 or 2 x 3 = 6
2. 2 x 6 = 12 or 6 x 2 = 12
3. 4 x 5 = 20 or 5 x 4 = 20
4. 6 x 7 = 42 or 7 x 6 = 42
5. 9 x 4 = 36 or 4 x 9 = 36

What's New

1. 12
2. 20
3. 81
4. 16
5. 64
6. 28
7. 9
8. 10
9. 42
10. 40

What I Know

2	21	6	40
4	27	24	80
6	4	30	18
7	12	42	45
4	24	54	63
6	32	7	40
8	36	14	72
12	40	42	10
14	10	63	40
20	15	70	50
6	30	16	70
12	40	24	80
18	45	32	100

Additional Activity

1. 1
2. 0
3. 10
4. 2
5. 4
6. 6
7. 10
8. 6
9. 1
10. 6

Assessment

1. 40
   5 groups of 8 sticks
2. 36
   9 groups of 4 sticks
3. 14
   7 groups of 2 sticks
4. 30
   3 groups of 10 sticks
5. 9
   1 group of 4 sticks

What I Can Do

1. 6
2. 0
3. 30
4. 36
   6 groups of 6
   6+6+6+6+6+6=36
5. 32
   8 groups of 4
   4+4+4+4+4+4+4+4=32

References

Department of Education. 2015. Mathematics Grade 3: Teacher's Guide. Pasig City, Department of Education.

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