Learning Mathematics

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MS RESEARCH FOUNDATION

Class 2

Term -2

Based on Multiple Intelligence Theory

cce enabled

Excerpts from National Curriculum Framework 2005

An overall summary of the National Curriculum Framework 2005

The fact that learning has become a source of burden and stress on children and their parents is an evidence of a deep distortion in educational aims and quality. To correct this distortion, the present NCF proposes five guiding principles for curriculum development

(i) connecting knowledge to life outside the school;
(ii) ensuring that learning shifts away from rote methods;
(iii) enriching the curriculum so that it goes beyond textbooks;
(iv) making examinations more flexible and integrating them with classroom life; and
(v) nurturing an over-riding identity informed by caring concerns within the democratic polity of the country

National Curriculum Framework 2005 on the perspective of education

Education must be able to promote values that foster peace, humaneness and tolerance in a multicultural society.

The National Curriculum Frame document seeks to provide a framework within which teachers and schools can choose and plan experiences that they think children should have. In order to realize educational objectives, the curriculum should be conceptualized as a structure that articulates required experiences. For this, it should address some basic questions:

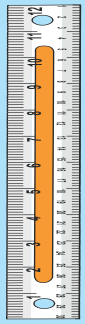
(i) What educational purposes should the schools seek to achieve?
(ii) What educational experiences can be provided that are likely to achieve these purposes?
(iii) How can these educational experiences be meaningfully organized?
(iv) How do we ensure that these educational purposes are indeed being accomplished?

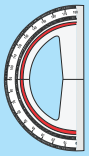
National Curriculum Framework 2005 on the Guiding Principles of education

Children acquire varied skills naturally while growing up in their environment. They also observe life and the world around them. When imported into classrooms, their questions and queries can enrich the curriculum and make it more creative. Such reforms will also facilitate the practice of the widely acknowledged curricular principles of moving from 'known to unknown', from 'concrete to abstract', and from 'local to global'.

The MFERD books are designed to adhere to the guiding principles laid down in the National Curriculum Framework 2005. We want the followers/students to abide and fulfill the educational objectives framed by the NCF so that they not only become honest and faithful citizens but also to be a part of the ever growing global world and economy. We sincerely believe that by following this curriculum the students will develop their personality which will be a beacon of light for others to reflect and ponder and be like one.

For MFERD's approach to address these perspectives please refer to the back cover page.





Preface

Praise be to Allah who created the man and taught him which he knew not. Peace and blessings of Allah be upon the last Prophet Muhammed (ﷺ) who abolished all the darknesses of ignorance and set human being on the track which leads to paradise, the eternal abode of the believer.

MFERD prepares a series of the books for children which could ingrain in them best and blessed teachings of Quran and Hadees which guarantee the entry in Jannat if obeyed with sincerity of intention.

Learning Mathematics has been written keeping in mind the intention of making math easy to understand and practise for the young learners.

Mathematics is a challenge for many of all ages. This is not unusual phenomenon that even a literate can have a specific phobia when it comes to discussing any mathematical problem. The obvious reason is mathematics was not introduced and explained to them in an easy and desired manner.

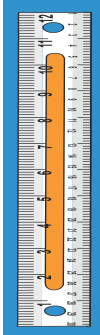
Learning Mathematics focuses on explaining and introducing all mathematical concepts in an easy language using different examples to make the concept clear for young learners.

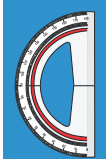
In order to generate interest in the subject multiple intelligence techniques have been used for students with different aptitudes, wherein the exercises are based upon the interest of the young learners.

Every chapter starts with the explanation of the concept that has been introduced in the chapter in a way that generates curiosity in the young minds.

Math swift at the end of the chapter helps the young learner to apply the knowledge gained in the chapter and form the concept learnt.

At places, some very basic Islamic concepts have also been given in mathematical perspective and explained at the child's cozy level. This is to show the fact that Islamic teachings have left no field of knowledge where some clear or exploring idea has not been given. We hope that experts would find the book to be an appreciable endeavour. Suggestions from all sides for improvement of the book are always welcome. We pray to Allah that this book becomes highly beneficial for every learner of mathematics. **Ameen.**





2nd Class

Contents

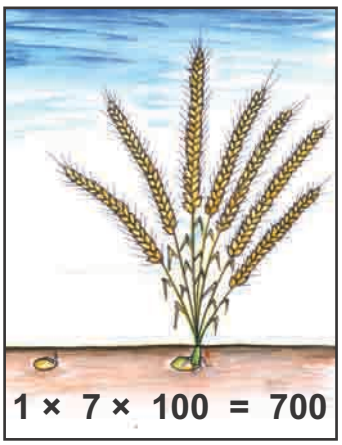
7 Multiplication

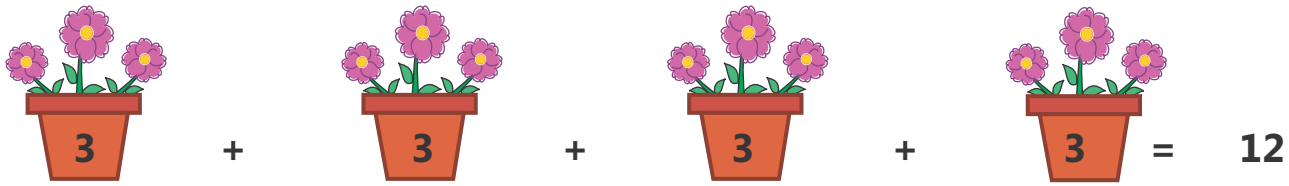
Ahmed : Mother, I want Ice cream.

Mother : Ahmed, buy two ice creams.
Have one for yourself and give the other to the boy standing there.

Ahmed : Mother, why do we give charity?

Mother : Ahmed, Allah says in the Quran that 'The example of those who spend their wealth in the way of Allah is like a seed (or grain) which grows into seven spikes, with each spike of hundred grains. And Allah multiplies (His reward) for whom He wills.'





This is called as repeated addition.

3 added 4 times equals 12 $4 \times 3 = 12$

Multiplication is a short way for repeated addition.

- '×' is the sign of multiplication.
- The answer we get when we multiply two numbers is called as the **product**.
- We say 12 is the **product** of 4 and 3.
- Here the numbers 4 & 3 are called **factors**.

$$\underbrace{3 \times 4}_{\text{Factors}} = \underbrace{12}_{\text{Product}}$$

Work 7.1 out

1. **Into how many spikes will one seed of charity grows?**
   (Hint: Represent this fact through multiplication)
2. **How many seeds does seven spikes bear?**
   (Hint: Represent this fact through multiplication)
3. **Count and build the multiplication table of 3.**

	3 ones are 3	3 × 1 = 3
	3 twos are 6	3 × 2 = 6
	3 threes are 9	3 × 3 = 9
	3 fours are 12	3 × 4 =
	3 fives are 15	3 × 5 =
	3 sixes are 18	3 × 6 =
	3 sevens are 21	3 × 7 =
	3 eights are 24	3 × 8 =
	3 nines are 27	3 × 9 =
	3 tens are 30	3 × 10 =

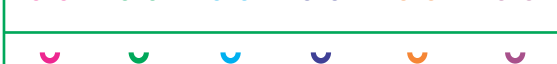
4. Count and build the multiplication table of 4.

	4 ones are 4	4 × 1 = 4
	4 twos are 8	4 × 2 = 8
	4 threes are 12	4 × 3 = 12
	4 fours are 16	4 × 4 =
	4 fives are 20	4 × 5 =
	4 sixes are 24	4 × 6 =
	4 sevens are 28	4 × 7 =
	4 eights are 32	4 × 8 =
	4 nines are 36	4 × 9 =
	4 tens are 40	4 × 10 =

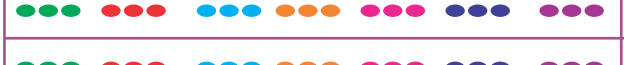
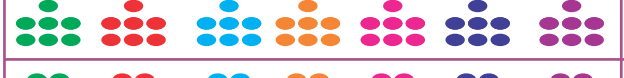
5. Count and build the multiplication table of 5.

	5 ones are 5	5 × 1 = 5
	5 twos are 10	5 × 2 = 10
	5 threes are 15	5 × 3 = 15
	5 fours are 20	5 × 4 =
	5 fives are 25	5 × 5 =
	5 sixes are 30	5 × 6 =
	5 sevens are 35	5 × 7 =
	5 eights are 40	5 × 8 =
	5 nines are 45	5 × 9 =
	5 tens are 50	5 × 10 =

6. Count and build the multiplication table of 6.

	6 ones are 6	6 × 1 = 6
	6 twos are 12	6 × 2 = 12
	6 threes are 18	6 × 3 = 18
	6 fours are 24	6 × 4 =
	6 fives are 30	6 × 5 =
	6 sixes are 36	6 × 6 =
	6 sevens are 42	6 × 7 =
	6 eights are 48	6 × 8 =
	6 nines are 54	6 × 9 =
	6 tens are 60	6 × 10 =

7. Count and build the multiplication table of 7.

	7 ones are 7	7 × 1 = 7
	7 twos are 14	7 × 2 = 14
	7 threes are 21	7 × 3 = 21
	7 fours are 28	7 × 4 =
	7 fives are 35	7 × 5 =
	7 sixes are 42	7 × 6 =
	7 sevens are 49	7 × 7 =
	7 eights are 56	7 × 8 =
	7 nines are 63	7 × 9 =
	7 tens are 70	7 × 10 =

8. Count and build the multiplication table of 8.

	8 ones are 8	8 × 1 = 8
	8 twos are 16	8 × 2 = 16
	8 threes are 24	8 × 3 = 24
	8 fours are 32	8 × 4 =
	8 fives are 40	8 × 5 =
	8 sixes are 48	8 × 6 =
	8 sevens are 56	8 × 7 =
	8 eights are 64	8 × 8 =
	8 nines are 72	8 × 9 =
	8 tens are 80	8 × 10 =

9. Count and build the multiplication table of 9.

	9 ones are 9	9 × 1 = 9
	9 twos are 18	9 × 2 = 18
	9 threes are 27	9 × 3 = 27
	9 fours are 36	9 × 4 =
	9 fives are 45	9 × 5 =
	9 sixes are 54	9 × 6 =
	9 sevens are 63	9 × 7 =
	9 eights are 72	9 × 8 =
	9 nines are 81	9 × 9 =
	9 tens are 90	9 × 10 =

10. Count and build the multiplication table of 10.

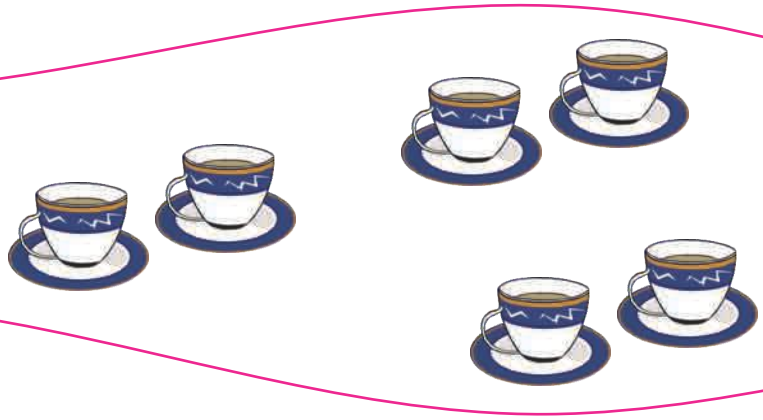
	10 ones are 10	10 × 1 = 10
	10 twos are 20	10 × 2 = 20
	10 threes are 30	10 × 3 = 30
	10 fours are 40	10 × 4 =
	10 fives are 50	10 × 5 =
	10 sixes are 60	10× 6 =
	10 sevens are 70	10 × 7 =
	10 eights are 80	10 × 8 =
	10 nines are 90	10 × 9 =
	10 tens are 100	10× 10 =

11. Write the multiplication tables of 2,3,4,5 and 6 in your notebook.

12. Write the multiplication fact for each of the following pictures.

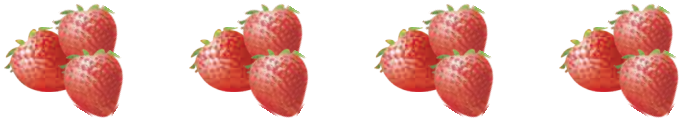
(One has been done for you)

a.



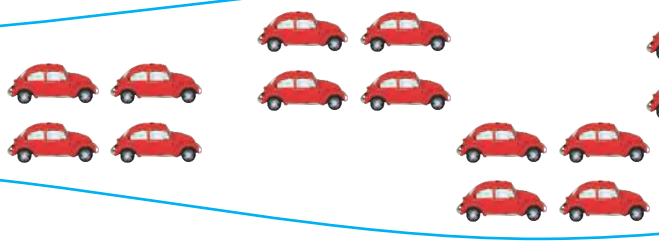
3 × 2 = 6

b.



c.

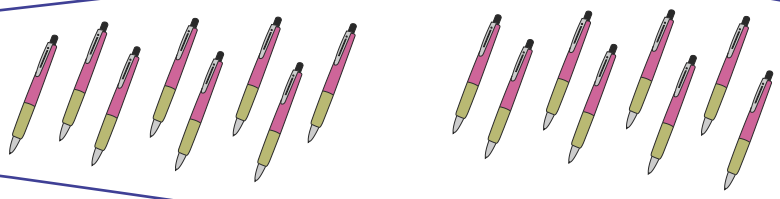
d.



e.

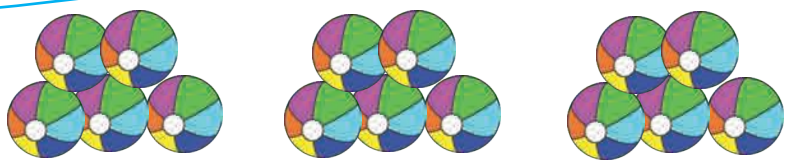
f.

g.

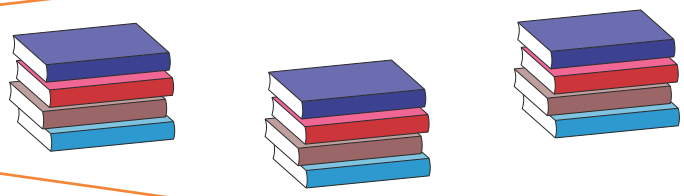


h.

i.



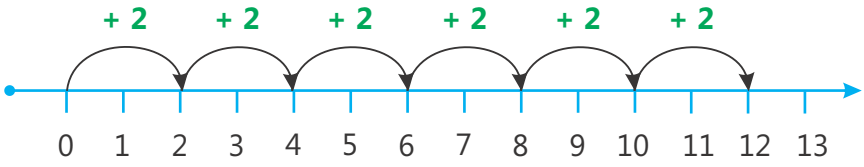
j.



13. Write the multiplication fact for each number line.

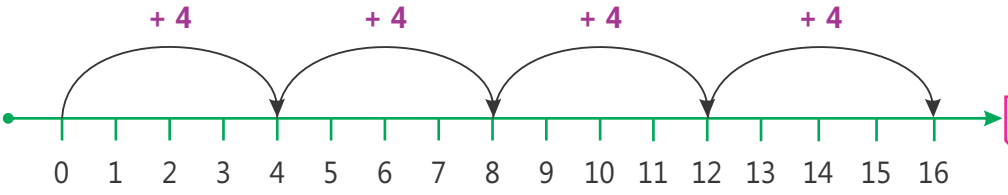
(One has been done for you)

a.

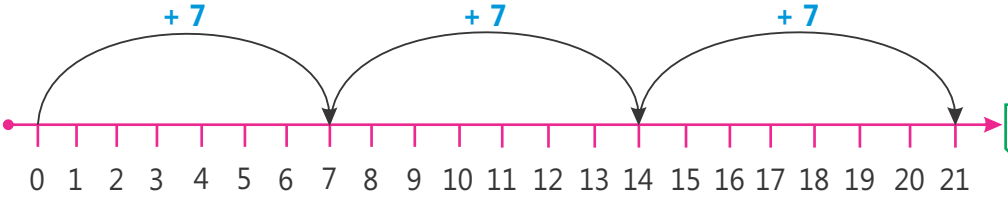


$6 \times 2 = 12$

b.



c.



d.