

TEACHING MATHS BY TIGER METHOD

CLASS : 6

WEEK :

LESSON : 1. NUMBERS

PAGES : 1-12

LEARNING OUTCOMES : 1. To identify prime and composite numbers
 2. To write a composite number as a product of prime numbers.
 3. To know the divisibility rules and use them to find the factors of a number.

TEACHING AIDS:

plastic beads, maths kit box, cell phone, projector.

1. INTRODUCTION : (10 minutes)**A. Motivation**

I will give some plastic beads to the students and introduce odd and even number by the activity of pairing them. I will also introduce prime and composite numbers by the way of an activity using beads [Refer page no. 4]

B. Recalling

The students will be guided to answer the questions which are given in 'Try these' are at page no 3.

2. SURVEY : (10 minutes)

Asking the students to read the pages from 2 to 10 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING: (15 minutes)**A. concept**

- A natural number greater than 1, having only 2 factors namely 1 and the number itself, is called a 'prime number'.
- A natural number having more than 2 factors is called a 'composite number'.
- A pair of prime numbers whose difference is 2 is called as 'twin primes'.
- We can find some rules for divisibility by 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11.

B. Teacher solving problems

exercise 1.1

1), 3), 4), 11) a)

C. Students solving problems

exercise 1.1.

2), 6), 9), 11) b), 13), 14), 15)

4. GROUP WORK : (10 minutes)

A. Teacher solving problems

5), 12), 19), 17)



exercise 1-1

B. Students solving problems

7), 8), 10), 20), 18)



exercise 1-1

5. REINFORCEMENT : (15 minutes)

FA(a) activity

- I will demonstrate the method 'sieve of Eratosthenes' to find out all the prime numbers from 1 to 100. [Using 'maths kit box' materials]
- I will show the QR code videos to learn the divisibility of 7 and 8 in playway method
- I will guide the students to do the activity at Page no. 9.

6. EVALUATION : (15 minutes)

1. classify the following numbers as prime or composite
101, 121, 57, 97, 73, 37, 39, 80
2. Find the prime factorisation of each number by NOT factor tree method and division method
(i) 200 (ii) 30
3. If the number $789*$ is divisible by 11, then the value of $*$ is _____

7. REMEDIAL TEACHING : (15 minutes)

- I will show the QR code video to memorise easily the first 25 prime numbers.
- I will show Youtube video to make understand the divisibility rules: <https://youtu.be/Y1PAKJ4of-M>

8. WRITING :

Exercise 1.1.

1) c) to f), 16)

9. FOLLOW UP WORK :

FA(a) activity

Activity which is given at page no: 5 [calendar activity]

TEACHING MATHS BY TIGER METHOD

CLASS : 6

WEEK :

LESSON : 1. NUMBERS

PAGES : 12 - 21.

LEARNING OUTCOMES : To find the HCF and the LCM of two or more numbers and use them in real life situations.

TEACHING AIDS: a chart board in which the numbers from 1 to 100 are tabulated, colour beads, tables book, cellphone, projector.

1. INTRODUCTION : (10 minutes)

two different coloured flash cards.

A. Motivation

I will introduce the HCF by using the situation 1 given at page no 12 and the LCM by using the situation 1 given at page no 15.

B. Recalling

- List out the factors of 6 and 8.
- Find the multiples of the given numbers
(i) 5 (ii) 9 (iii) 12.

2. SURVEY : (10 minutes)

Asking the students to read the pages from 12 to 20 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING : (15 minutes)**A. concept**

* The highest common factor of any two non-zero whole numbers is the largest common factor of both the numbers.

* The least common multiple of any two non-zero whole numbers is the smallest common multiple of both the numbers.

B. Teacher solving problems

exercise 1.2

1) i), ii), iv) 2) ii), iii), 3) i), v) 4) i), v)

C. Students solving problems

exercise 1.2

1) iii), v) 2) i), iv), v) 3) ii), iii), iv), vi) 4) ii), iii), iv), vi)

4. GROUP WORK : (10 minutes)

A. Teacher solving problems



exercise 1-2

5), 7), 10)

B. Students solving problems



exercise 1-2

6), 8), 9), 11)

5. REINFORCEMENT : (15 minutes)

FA(a) activity

- I will ask to do the activities given in the situation 2 (page no 13), situation 3 by using different coloured flash cards (page no: 16) to understand HCF and LCM well.
- I will demonstrate how can we find LCM using tables book.
- I will explain the method of finding HCF & LCM using 'venn diagram' source: <https://youtu.be/BbefD2qK10Q>

6. EVALUATION : (15 minutes)

1. Say true or false

- LOT (i) The HCF of 5 and 7 is 1
(ii) The numbers 19 and 23 are co-primes.

2. Find the HCF and LCM of the given numbers

MOT (i) 6, 10 (ii) 12, 9.

3. Find the smallest number which is exactly divisible by 2, 3, 4 and 5.

7. REMEDIAL TEACHING : (15 minutes)

- I will show QR code videos and will guide the students to do the activities with 1-100 chart board, colour beads ~~which~~ as shown in these videos.
- I will show some youtube videos
For HCF: <https://youtu.be/qymDMFT7YSU>
For LCM: <https://youtu.be/sk9XvLCKxES>.
Exercise 1.2.

8. WRITING :

12), 13)

9. FOLLOW UP WORK :

FA(a) activity

ICT corner activity given at page no. 20

WEEK :

CLASS : 6

LESSON : 2. MEASUREMENTS

PAGES : 24 - 31

LEARNING OUTCOMES : 1. To understand the position of decimal point in the conversion of smaller unit to larger unit and vice versa. 2. To do 4 fundamental operations on quantities of different units.

TEACHING AIDS:

Ruler, 5m measuring tape, weighing machines

1. INTRODUCTION : (10 minutes)**A. Motivation**

I will read the conversation given in 'Introduction' part at page no 24 and will ask the students to observe the points which are discussed there.

B. Recalling

I will use the questions under 'Try these' part for recalling purpose. [page no. 26]

2. SURVEY : (10 minutes)

Asking the students to read the pages from 26 to 31 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING : (15 minutes)**A. concept**

Length	Weight	Volume (Capacity)
• 1 km = 1000m	• 1 kg = 1000g	• 1 kl = 1000l
• 1 m = 100cm	• 1 g = 1000mg	• 1 l = 100ml.
• 1 m = 1000mm		
• 1 cm = 10mm		

* Measurements with the same unit can be added/subtracted, but unlike units of measurements should be converted into like units and then they can be added/subtracted.

B. Teacher solving problems

1) i), ii), iii), iv) 2) i), ii) 3) i), ii) 4) i) 5) i) 2.1.

C. Students solving problems

1) ii), v) 2) iii), iv), v) 3) iii) 4) ii) 5) i)

4. GROUP WORK : (10 minutes)

A. Teacher solving problems



exercise 2.1

7), 11), 14)

B. Students solving problems



exercise 2.1

8), 9), 10), 13), 15)

5. REINFORCEMENT : (15 minutes)

* I will explain the conversion within the Metric system using the diagram given at page no: 26
[Shortcut to remember: King Henry Doesn't Usually Drink Chocolate Milk]

- I will also teach about decimal point position when multiplying/dividing of a decimal number by the powers of ten [page no: 27]

6. EVALUATION : (15 minutes)

1. Fill in the blanks

LOTA) 8m = — cm b) 3000g = — kg c) 5l = — ml.

2. Add: a) 4cm 2mm + 8mm b) 800g + 3kg 400g

NOT

3. An iron rod is 3m length. Arun wants to cut it into pieces of 60cm length. How many pieces will he get?

7. REMEDIAL TEACHING : (15 minutes)

- I will show some Youtube videos and give more practice in conversions and 4 fundamental operations within Metric Systems.

https://youtu.be/436E_5cerPa.

8. WRITING :

Exercise 2.1

b) i) to v), 12), 16), 17), 18)

9. FOLLOW UP WORK :

'ICT CORNER' activity will be given. FA(a) activity [page no. 39]

TEACHING MATHS BY TIGER METHOD

WEEK :

CLASS : 6

LESSON : 2. MEASUREMENTS

PAGES : 32-42

LEARNING OUTCOMES : 1. To read time in a clock and convert the 12 hours format to the 24 hours format and vice versa.

2. To find the duration between 2 given time instances

TEACHING AIDS : 3. To do conversion of units of time.

Model clock from Maths kit box, 24 hr \rightarrow 12 hr format conversion
clock model [Refer pg no 35], cell phone

1. INTRODUCTION : (10 minutes)**A. Motivation**

- * I will ask the students to answer the following questions
- How long do you take to come to school from your home?
 - At what time does your lunch break start?

- * I will show the QR code video that tells "The story

B. Recalling of clock"

I will ask the students to read and write the time from the clocks shown at the page no: 33.

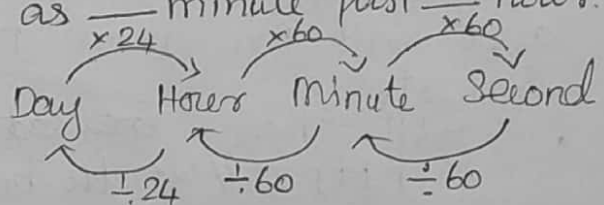
[Recap]

2. SURVEY : (10 minutes)

Asking the students to read the pages from 33 to 39, and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING : (15 minutes)**A. concept**

- When the minute hand is on the left hand side of the clock we read the time as — minute to — hours.
- When the minute hand is on the right hand side of the clock we read the time as — minute past — hours.
- Conversion of time.
- Conversion of Time Formats (page no. 35)

**B. Teacher solving problems**

exercise 2.2

D) i) i), 3) i), ii), 5)

C. Students solving problems

exercise 2.2.

D) iii) to v), 2) iii) to v), 4)

4. GROUP WORK : (10 minutes)

A. Teacher solving problems



exercise 2.2

b) i), iii), D), 8) i), 9), 10), 13), 14) i)

B. Students solving problems



exercise 2.2

b) ii), 7) ii), 8) ii), 10), 12), 14) ii), 15)

5. REINFORCEMENT : (15 minutes)

* I will show the QR code video about "Railway time"

*

5 a.m	10 a.m	FAA activity	2:00 p.m.	7:20 p.m.
7:30 a.m	9:30 a.m		3:30 p.m.	10:00 p.m.

I will place the above flash cards on the table. I will ask 2 students to come forward and take one card from each set. Then the students will have to find the duration between those two times.

6. EVALUATION : (15 minutes)

- Fill in the blanks: (i) 5 days = _____ hours (ii) 14 days = _____ weeks
- Convert the following: (i) 30 minutes into seconds
(ii) 300 minutes into hours.
- Change 4:30 a.m into 24 hour format.
- Find the total duration of working hours of your school in a week.

7. REMEDIAL TEACHING : (15 minutes)

- I will make a 24 hour clock format [refer page no 35] and will give more practice in conversion of time formats.
- I will show ~~QR code~~ Youtube video.
<https://youtu.be/-AyMXhr4NnU>.

8. WRITING :

Exercise 2.2.

b) iv), v) D) iii), iv) 8) iii) to iv) 16) to 20)

9. FOLLOW UP WORK :

I will ask the students to do the activities given at page number 38.

TEACHING MATHS BY TIGER METHOD**WEEK :****CLASS : 6****LESSON :** 3. BILL, PROFIT AND LOSS**PAGES :** 44 - 55

LEARNING OUTCOMES : 1. To prepare a bill and verify the bill amount. 2. To calculate profit and loss 3. To calculate cost price, selling price, marked price & discount.

TEACHING AIDS:

Cash bills, pen, cap, scale, cellphone, projector.

1. INTRODUCTION : (10 minutes)**A. Motivation**

I will show some cash bills - which I have already collected from local shops and will ask some simple questions like what is the name of the shop? where it is placed?.. and so on.

B. Recalling

1. If the cost of 1kg tomato is ₹15, then what is the cost of 4kg tomatoes?
2. Gokila bought a set of bangles for ₹60 which is marked as ₹80, then what is the discount amount?

2. SURVEY : (10 minutes)

Asking the students to read the pages from 44 to 51. and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING: (15 minutes)**A. concept**

* From the bills, we can understand the following details
 1. Name of the shop 2. Serial number of the bill 3. Date
 4. The list of items purchased 5. Cost of each items 6. Total Number of items purchased 7. Amt paid 8. Tax details

* If C.P. < S.P. there is Profit \Rightarrow Profit = S.P. - C.P.

* If C.P. > S.P., there is loss \Rightarrow Loss = C.P. - S.P.

* If C.P. = S.P., there is no profit or loss.

* Discount = M.P. - S.P.

* If there is no discount, then $M.P. = S.P.$

B. Teacher solving problems

(1, 3), (15), (16)



exercise 3.1

C. Students solving problems

(2), (4), (17), (18)



exercise 3.1

4. GROUP WORK : (10 minutes)

A. Teacher solving problems
5), 10)



exercise 3.1

B. Students solving problems
6), 7), 11), 13)



exercise 3.1

5. REINFORCEMENT : (15 minutes)

- I will show the Q.R. code video to understand all the elements of a bill.
- I will explain the concepts of C.P., S.P., M.P Profit, Loss and discount using some real life objects like pen, cap, scale.. etc.
- I will show Youtube videos
https://youtu.be/_cW7_BUDYew

6. EVALUATION : (15 minutes)

1. Fill in the blanks
LOT • Profit = $\text{---} - \text{C.P.}$ • S.P + Discount = ---
2. If Arun marks his product to be sold for ₹400 and gives a discount of ₹50, then find the S.P.
- MOB 3. Asking some questions from the cash bill given at P.no. 47.
4. Arrange the following in ascending order
HOT (i) C.P., M.P., Discount (ii) M.P., S.P., Discount.

7. REMEDIAL TEACHING : (15 minutes)

By introducing various situation, I will teach the concepts of C.P., S.P., Profit, loss, M.P. and Discount

8. WRITING :

Exercise 3.1

8), 9), 12), 14)

9. FOLLOW UP WORK :

I will ask the students to do the 'ICT CORNER' activity given at page no 53. FA(a) activity

TEACHING MATHS BY TIGER METHOD**WEEK :****CLASS : 6.****LESSON :** 4. GEOMETRY**PAGES :** 57 - 67

LEARNING OUTCOMES : 1. To understand the formation of triangles and the basic elements of a triangle. 2. To know the types of triangles and their properties.

TEACHING AIDS:

Broom sticks, Ice candy sticks, Triangle cut outs, cellphone, maths kit box, projector.

1. INTRODUCTION : (10 minutes)**A. Motivation**

- I will use the activity which is given at page no 57 [Using sticks] to define a triangle.
- I will ask the students to draw some triangles using the dots which are given at page no 59.

B. Recalling

- Identify the triangles from the given shapes at page no. 58
- Can a triangle be drawn using 3 collinear points?

2. SURVEY : (10 minutes)


Asking the students to read the pages from 59 to 64 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING : (15 minutes)**A. concept**

- A three-sided closed plane figure is called as triangle.
- Sum of all three angles of a triangle is 180° .
- A triangle has 3 sides, 3 angles and 3 vertices.
- Types of triangle based on its sides
 1. Isosceles triangle
 2. Scalene triangle
 3. Equilateral triangle
- Types of triangle based on its angles.
 1. Acute angled triangle
 2. Right angled triangle
 3. Obtuse angled triangle
- In a triangle, the sum of any 2 sides is greater than the third side.

B. Teacher solving problems

1), 4), 9) i), ii)

 exercise 4.1

C. Students solving problems

2), 3), 5), 9) iii) to vi)

 exercise 4.1

4. GROUP WORK : (10 minutes)

A. Teacher solving problems



exercise 4.1

6) i), ii) 7) i), iii), iv) 8) i), ii) 14), 15)

B. Students solving problems



exercise 4.1

6) iii) to vi) 7) ii), v), vi) 8) iii) to vi), 10),

5. REINFORCEMENT : (15 minutes)

FA (a) activity

- Students will be guided to do the activities at page numbers 60 and 63. ~~and~~
- I will ask the students to do the 'Try these' Sums given at page numbers 61, 62 and 64.
- I will show some Youtube videos
- * <https://youtu.be/otLXIffNk>. * <https://youtu.be/1KOG-Y4IjRA> * <https://youtu.be/TTmkBzZYnJU>.

6. EVALUATION : (15 minutes)

1. classify the given triangles based on angles.
HOT
2. The sum of 3 angles of a triangle is —
3. Can a triangle be formed with the following sides?
HOT (i) 8cm, 7cm, 6cm (ii) 12cm, 3cm, 8cm.
4. Can a triangle be formed with the following angles?
HOT give reasons. (i) $90^\circ, 90^\circ, 0^\circ$ (ii) $180^\circ, 0^\circ, 0^\circ$

7. REMEDIAL TEACHING : (15 minutes)

- Using maths kit box, students will do and learn "Angle sum property"
- I will show QR code videos
- I will teach the 'Angle sum property' by cutting the corners of a triangle shaped cut outs.
- By using broom sticks I demonstrate the 'triangle inequality property'.

8. WRITING :

Exercise 4.1.

11), 12), 13), 16)

9. FOLLOW UP WORK :

FA (a) activity

ICT CORNER activity which is given at page number 72.

TEACHING MATHS BY TIGER METHOD

WEEK :

CLASS : 6

LESSON : 4. GEOMETRY

PAGES : 68-73

LEARNING OUTCOMES : To draw parallel and perpendicular lines to a given line segment using a set square.

TEACHING AIDS:

Ruler, Set square, A4 sheets, Colours ropes, Ice candy

1. INTRODUCTION : (10 minutes) Sticks**A. Motivation**

I would recall the concepts of perpendicular lines and parallel lines using the situations given at page numbers 68 and 70.

B. Recalling

I would prepare some models of English alphabet like E, F, H, I, L, M... and so on and ask the students to find out 1) line segments and 11) line segments.

2. SURVEY : (10 minutes)

Asking the students to read the pages from 68 to 73 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING: (15 minutes)**A. concept**

Set Squares have several uses

- To construct the specific angles 30° , 45° , 60° , 90°
- To draw parallel and perpendicular lines.
- To measure the height of the shapes.

I will instruct the students how to draw 1) lines and 11) lines using the steps given at the page numbers 69, 70 and 71.

B. Teacher solving problems

exercise 4.2

1)

C. Students solving problems

exercise 4.2

2)

4. GROUP WORK : (10 minutes)

A. Teacher solving problems

3) 1) , 4)



exercise 4.2

B. Students solving problems

3) 1)

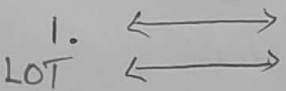
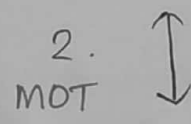


exercise 4.2

5. REINFORCEMENT : (15 minutes)

- I will use paper folding to explain ll and \perp lines.
- I will demonstrate the construction using ruler and setsquare on the blackboard
- I will show some Youtube videos.

Parallel lines: <https://youtu.be/VASdAe37Zx8>Perpendicular lines: <https://youtu.be/qMxhsOz4uVY>**6. EVALUATION : (15 minutes)**

1.  check these lines whether they are ll or not?
2.  Draw a \perp line to this given line at any point.
3. Sum no: 6 in Ex 4.3 given at page no. 73

7. REMEDIAL TEACHING : (15 minutes)

Placing setsquare and scale in the proper place to draw parallel lines is much difficult task to the slow learners. So I will give individual attention to them to make it easy.

8. WRITING :

Exercise 4.2

5)

9. FOLLOW UP WORK :

The students ~~are~~ will be asked to make (draw) tangram shapes using Setsquares. FA(a) activity

TEACHING MATHS BY TIGER METHOD

WEEK :

CLASS : 6

LESSON : 5. INFORMATION PROCESSING

PAGES : 75-83

LEARNING OUTCOMES : 1. To know how to represent numerical and algebraic expressions by tree diagrams. 2. To know how to write numerical and algebraic expressions from tree diagrams.

TEACHING AIDS:

plastic round tokens (as nodes), tooth picks (as branches), cut-out of Numbers and letters, cellphone and projectors.

1. INTRODUCTION : (10 minutes)

A. Motivation

I will say the important of tree diagram with the help of the concepts which is given under '5.1. Introduction' heading at page no. 75.

B. Recalling

- Solve this using BIDMAS rule. $7 \times 5 - 2$
- What do you mean by $9x$?
(i) $9+x$ (ii) $9 \times x$ (iii) $9-x$

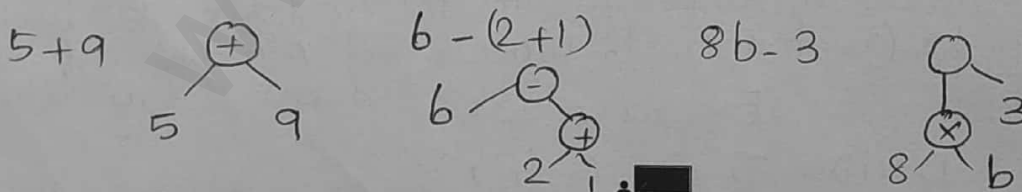
2. SURVEY : (10 minutes)

Asking the students to read the pages from 75 to 82 and guiding them to notice the main concepts & formulas.

3. UNDERSTANDING: (15 minutes)

A. concept

Tree diagram is a picture which look like an upside-down tree. Every node has one or two branches and the leaves are numbers. The branching nodes have operations on them.



B. Teacher solving problems

1) i), 2) i) 3) i), ii), 4) i)

C. Students solving problems


1) i), 2) ii), 3) ii), iv), 4) ii)


exercise 5.1.

exercise 5.1.

4. GROUP WORK (10 minutes)

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A. Teacher solving problems  exercise 5.1.
1) iii), 2) iii), 3) vi), 4) iv)

B. Students solving problems  exercise 5.1.
1) v), 2) iv), 3) vii), viii), 4) v)

5. REINFORCEMENT : (15 minutes)

* I will ask the Students to draw the diagram from bottom to top with proper understanding.

* I will show some Youtube videos to enrich this content.

link: https://youtu.be/_LxbhLNRZKl.

6. EVALUATION : (15 minutes)

* Convert the following expression into tree diagrams
LOT 1. $9 + 5$ 2. $10 \div 2$ 3. $a + b$ 4. xy

MOT 5. $8 + 12 \div 3$ 6. $(3 - 2) \div (5 - 4)$ 7. $ab - cd$.

* Convert the following tree diagrams into algebraic expressions. (i)  (ii) 

7. REMEDIAL TEACHING : (15 minutes)

• The students will be guided to ~~show~~ see QR code video to rectify their mistakes.

• I will do the activity with plastic tokens (as nodes), tooth picks (as branches), Number and Alphabet cut-outs

8. WRITING :

Exercise 5.1. to form a tree diagram.

1) vi) 3) v) 4) iii)

9. FOLLOW UP WORK :

I will ask the Students to read and understand the concept which is given at page number 82 [DO you know?]