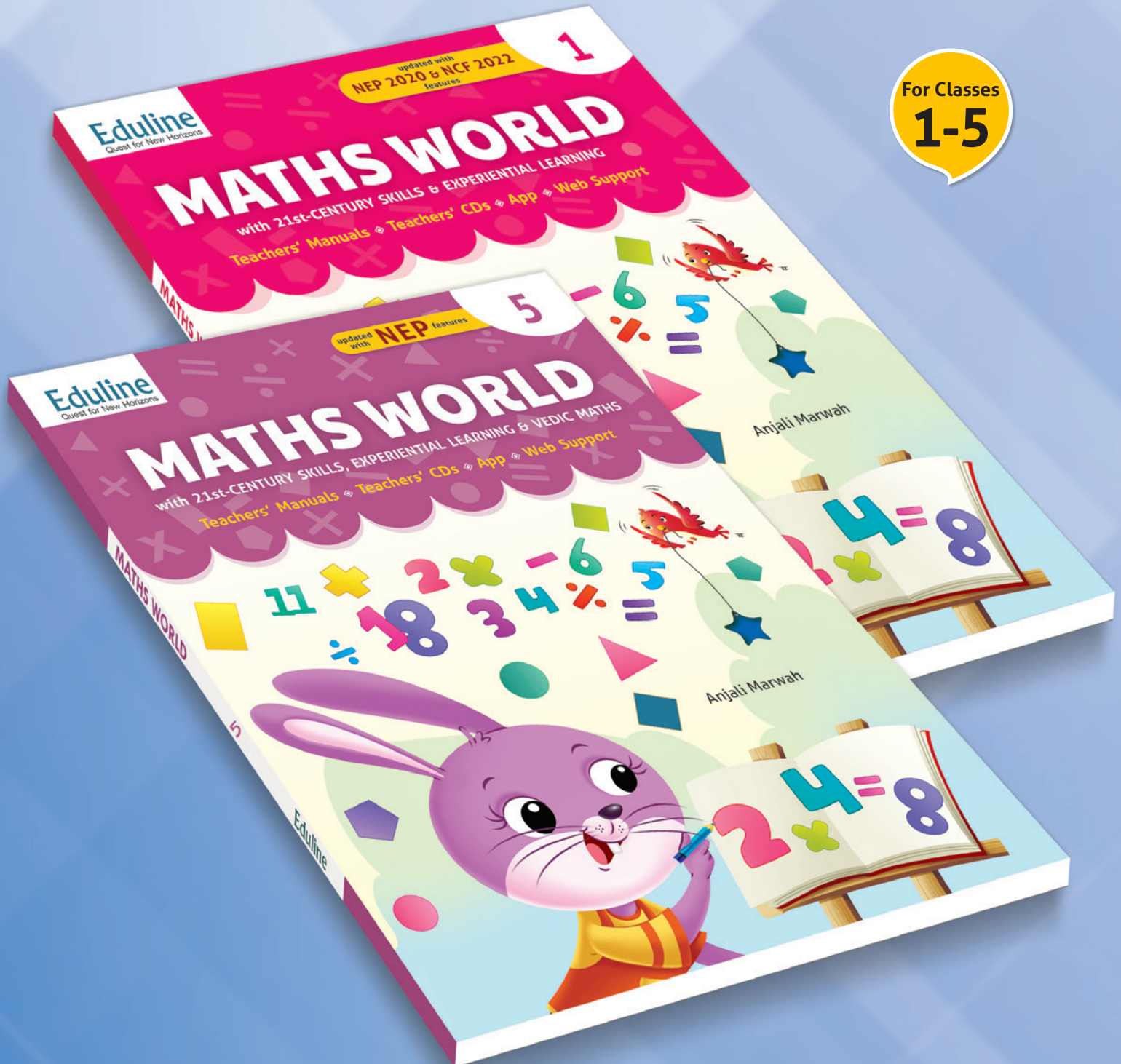




# MATHS WORLD

with 21st-CENTURY SKILLS, EXPERIENTIAL LEARNING & VEDIC MATHS



For Classes  
**1-5**

with Teachers Manuals , App, Web Support and CDs

## Learning Outcomes

### Pre-number Concepts

After this lesson, students will understand:

- the concept of big, short, heavy, tall, and near and far.
- the concept of rolling and sliding.

### Numbers 1 to 9 and 0

After this lesson, students will understand:

- numbers 1 to 9.
- the concept of 0.
- how to count forward and backward.
- more and less.
- how to compare bigger and smaller numbers.
- before, after and between.
- cardinal and ordinal numbers.

### Addition up to 9

After this lesson, students will understand:

- the concept of addition.
- how to count forward using a number strip.

- vertical addition.
- addition with 0 and 1.
- addition using number stories.

### Subtraction up to 9

After this lesson, students will understand:

- the concept of subtraction.
- how to subtract by crossing out.
- vertical subtraction.
- subtracting 0 and 1.
- subtracting the same number and a number before.
- subtraction using number stories.

### Shapes and Patterns

After this lesson, students will understand:

- straight and curved lines.
- how to identify circles, triangles, squares and rectangles.
- how to identify different solid shapes.
- the concept of patterns.

### Numbers up to 20

After this lesson, students will understand:

- how to build numbers.
- and use numbers 11 to 20.
- how to count on the abacus.
- before, after and between.



Book - 1, Page - 6



**LEARNING OUTCOMES** list the focus of each lesson

**GET GOING** full-page, picture-based warm-ups

**SPOT CHECK** in-text questions to explore comprehension of concepts



## 5 Division



### Get Going

experiential learning, 21st-century skills: critical thinking, flexibility, information literacy, collaboration, communication, innovation, technological literacy, media literacy

#### 1. Solve.

- a)  $6 \times 9$       b)  $54 \div 9$       c)  $5 \times 10$   
d)  $50 \div 10$       e)  $12 \times 8$       f)  $96 \div 12$

#### 2. Use repeated subtraction and divide to find the answer of the following. What do you observe?

- a)  $70 \div 7$       b)  $72 \div 12$       c)  $64 \div 8$       d)  $81 \div 9$

#### 3. Find the quotient and remainder and check the answer.

- a)  $60 \div 7$       b)  $64 \div 9$       c)  $72 \div 8$   
d)  $125 \div 9$       e)  $365 \div 8$       f)  $242 \div 5$

#### 4. Solve the following.

- a) A school has 12 classes with equal strength. If there are 7248 students, how many students are there in each class?  
b) The cost of 7 shirts is ₹ 10,150. What is the cost of each shirt?  
c) A cinema hall has a total capacity of 864 seats. There are 36 rows. How many seats are there in each row if there are equal number of seats in each row?  
d) 2436 kg of rice is to be distributed among 12 people. How many kg of rice will each person get?

73

Book - 4, Page - 73

#### 5. Complete the place value chart given below.

|    | Number | Tens | Ones | • | Tenths | Hundredths |
|----|--------|------|------|---|--------|------------|
| a) | 0.15   |      |      |   |        |            |
| b) | 17.82  |      |      |   |        |            |
| c) | 3.86   |      |      |   |        |            |
| d) | 2.98   |      |      |   |        |            |



#### Spot Check

- Write  $\frac{9}{100}$  fraction as a decimal.
- Express 2.92 as fraction.
- Express the following decimals in words.  
a) 15.72      b) 58.06
- Complete the place value chart given below.

| Number | Tens | Ones | • | Tenths | Hundredths |
|--------|------|------|---|--------|------------|
| 54.72  |      |      |   |        |            |

#### Application of Decimals

##### Measurement of length

$$100 \text{ cm} = 1 \text{ m}$$

$$1 \text{ cm} = \frac{1}{100} \text{ m} = 0.01 \text{ m}$$

$$\text{Therefore, } 15 \text{ cm} = \frac{15}{100} \text{ m} = 0.15 \text{ m}$$

$$8 \text{ cm } 78 \text{ m} = 8 \frac{78}{100} = 8.78 \text{ m}$$

153

Book - 4, Page - 153

**MATHS TIP** hints for better understanding

**THINK AND ANSWER** questions to encourage analytical thinking and problem-solving

**EXERCISES** exhaustive range of exercises for conceptual reinforcement

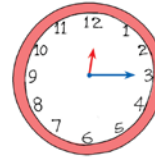
**ANSWERS** to the maincourse book

This means that in 1 hour, the minute hand completes a circle around the face of the clock.

A minute hand takes 5 minutes to move from one number to another. So that means the minute hand takes  $5 \times 12 = 60$  minutes to complete one circle of the clock.

The numbers written outside the clock are meant to show you the minutes travelled by the minute hand.

In the clock shown above, the hour hand has crossed 4, and the minute hand is on 6. This means the time is 30 minutes past 4 or 4:30.



The time is 15 minute past 12, or quarter past 12.



The time is 50 minutes past 2 or 10 minutes to 3.

#### Maths Tip

When the minute hand is on the right hand side, we mention the minutes past the hour. When the minute hand is on the left hand side, we mention the minutes to the next hour.



157

Book - 3, Page - 157

#### Think and Answer

Why is mercury used in a thermometer and not water?

#### Maths Tip

- Normal temperature of the human body is  $98.4^{\circ}\text{F}$ .
- Water freezes at  $0^{\circ}\text{C}$ .
- Water boils at  $100^{\circ}\text{C}$ .



#### Exercise 3

1. What is the standard unit for measurement of the following.

- Length  $\rightarrow$
- Weight  $\rightarrow$
- Capacity  $\rightarrow$

2. Fill in the blanks.

- Kilometre (km) is generally used for measuring \_\_\_\_\_.
- Metre (m) is generally used for measuring \_\_\_\_\_ and \_\_\_\_\_.
- Centimetre (cm) is generally used for measuring \_\_\_\_\_ lengths.
- Millimetre (mm) is generally used for measuring \_\_\_\_\_ lengths.
- Kilogram (kg) is generally used for measuring \_\_\_\_\_ things.
- Gram (g) is generally used for measuring \_\_\_\_\_ things.
- Milligram (mg) is generally used for measuring \_\_\_\_\_ things.
- Litre (L) is generally used for measuring \_\_\_\_\_ of liquid.
- Millilitre (mL) is generally used for measuring \_\_\_\_\_ of liquid.
- To convert from smaller units to bigger units we \_\_\_\_\_.
- To convert from bigger units to smaller units we \_\_\_\_\_.
- The degree of hotness or coldness of a body is called \_\_\_\_\_.
- The instrument used to measure temperature is called \_\_\_\_\_.
- There are two scales to measure temperature. They are \_\_\_\_\_ and \_\_\_\_\_.
- Water freezes at \_\_\_\_\_  $^{\circ}\text{C}$ .
- Water boils at \_\_\_\_\_  $^{\circ}\text{C}$ .
- Normal body temperature of the human body is \_\_\_\_\_  $^{\circ}\text{F}$ .

143

Book - 5, Page - 143

## Answers

### 1. Pre-number Concepts

#### Get Going

- above c) under d) under

#### Worksheet

- a) top b) in front of c) between d) left  
e) inside
- a) on b) near c) left

### 2. Numbers 1 to 9 and 0

#### Get Going

people: 6, trees: 4, boat: 1, fish: 2, hens: 8

#### Exercise 1

- b) 9 c) 4 d) 6 e) 6 f) 5 g) 7 h) 2

#### Exercise 2

- a) 5 b) 2 c) 4 d) 1 e) 3 f) 0
- five, seven, nine; zero, 1, two, 3, four, 5

#### Exercise 3

- 3, 4; 4, 6
- four, six; seven, eight

#### Exercise 4

- 8, 7, 5; 6, 4, 3
- four, two, one; seven, six, five

#### Exercise 6

- 5, 3, 7, 5, 8
- 5, 0, 1, 7
- 8, 7, 9, 5, 9
- 8, 6, 8, 9
- 1, 2, 3, 5, 9; 2, 3, 4, 7, 8
- 9, 6, 5, 3, 1; 9, 8, 5, 2, 1

### Exercise 7

- a) 5 b) 3 c) 7 d) 2 e) 1 f) 4

- a) 4 b) 6 c) 2 d) 9 e) 5 f) 3

- 5, 2

### Mental Maths

- a) 2, 4, 5, 8, 9 b) 3, 4, 6, 8, 9
- a) 9, 7, 6, 5, 0 b) 8, 7, 5, 2, 1 c) 9, 8, 6, 4, 3

### Worksheet

- a) 9 b) 6
- a) 6 b) 2 c) 8 d) 4
- a) five b) seven
- a) 6 b) 7
- a) 9 b) 6
- a) 8 b) 8

### 3. Addition up to 9

#### Get Going

8, 7, 3

#### Exercise 1

- b) 3, 2, 5 c) 4, 3, 7
- a)  $4 + 2 = 6$  b)  $5 + 3 = 8$  c)  $7 + 2 = 9$   
d)  $3 + 4 = 7$
- b)  $3 + 3 = 6$  c)  $3 + 4 = 7$  d)  $5 + 1 = 6$
- a) 9 c) 6 d) 8 e) 7 f) 8 g) 6 h) 7 i) 7 j) 9  
k) 9 l) 8

### Think and Answer

$3 + 2 = 5$

#### Exercise 2

- 7 b) 8 c) 6 d) 8 e) 9

155

Book - 1, Page - 155





## Maths Lab Activity

EXPERIENTIAL LEARNING

**Objective:** to make a maths poster on numbers and computation

**Material needed:** chart paper, crayon, Fevicol

- Steps:**
1. Choose a number or a math symbol (+, -, ×, ÷) for the subject of your poster.
  2. Describe your number or symbol on the poster.
  3. Begin your poster by writing 'WANTED'.
  4. Write four digit numbers.
  5. Write in words.
  6. Express the number in as many ways as possible.

**Example:** 3249

**Wanted:** 3249

- ❖ Odd number
- ❖ My house number
- ❖ Can be found by adding  $3000 + 200 + 40 + 9$
- ❖ It is a square number
- ❖ It is divisible by 3
- ❖ It is divisible by 9
- ❖ It is 751 away from 4000
- ❖ It can be found in  $(32 \times 100 + 49)$
- ❖ 361 can be multiplied by 9
- ❖ It is divisible by 19



### Heritage Point: Vedic Maths

EXPERIENTIAL LEARNING

$671 \div 4$  (easy division by Vedic Maths)

**Steps to divide:**

4 divided by 6 = 1 remainder 2. Write 2 before the next digit, 7, making it 27.

4 divided by 27 = 6 remainder 3. Write 3 before the next digit, 1, making it 31.

4 divided by 31 = 7 remainder 3.

**The answer is 167 remainder 3.**

44

Book - 5, Page - 44

## 21ST-CENTURY SKILLS &

**VEDIC MATHS** encourages problem-solving through ancient Indian ways

**LIFE SKILLS AND VALUES** real-life mathematical thinking using the do-and-learn approach

**WORKSHEET** practice questions to clarify the concepts learnt.

**MENTAL MATHS** hones the learner's ability to work out sums mentally

### Life Skills

EXPERIENTIAL LEARNING

Divide your time wisely between play and studies. Both activities are important for life. Make a time-table to devote enough time to each activity.

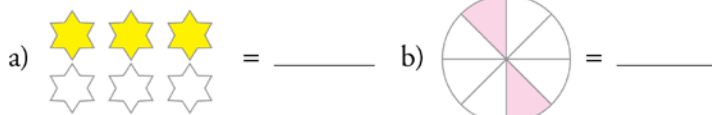
Book - 4, Page - 202



## Worksheet

EXPERIENTIAL LEARNING

1. What fraction of the whole is shaded?



2. Shade the parts of each figure so that it represents the given fraction.



Book - 2, Page - 179



## EXPERIENTIAL LEARNING

**MATH LAB ACTIVITY** an opportunity to learn maths by visualizing and reasoning

**ACTIVITY** exploratory tasks

**PROJECTS** research-based tasks to enhance various skills

**EVERYDAY MATHS** maths in real life



### Mental Maths

EXPERIENTIAL LEARNING

You can add and subtract on a number grid.

|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 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  |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

To add ones, move forward.  
To subtract ones, move back



To add tens, move down.  
To subtract tens, move up



Choose a number, say, 35.

a) 1 less than 35? Move back 1 box. You reach .

b) 4 more than 35? Move forward 4 boxes. You reach .

Book - 2, Page - 49

### Activity

EXPERIENTIAL LEARNING

Work with your partner. Think of a 3-digit number. Take turns to ask your partner to

- multiply by 2.
- multiply the product obtained by 5.
- the answer.

Drop the last digit of the product.

The remaining number will be the number thought by your partner.

### Project

EXPERIENTIAL LEARNING

For each day of one week, write down the following:

| Number of hours spent on | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|--------------------------|--------|---------|-----------|----------|--------|----------|--------|
| sleep                    |        |         |           |          |        |          |        |
| playing outdoor games    |        |         |           |          |        |          |        |
| watching television      |        |         |           |          |        |          |        |
| playing on the mobile    |        |         |           |          |        |          |        |
| studying at home         |        |         |           |          |        |          |        |
| TOTAL                    |        |         |           |          |        |          |        |

The above chart gives you details of the number of hours you spend on different activities in a week. Multiply each number you get by 52. This gives you the number of hours you spend on sleeping, playing and studying. Think over it and discuss with your parents.

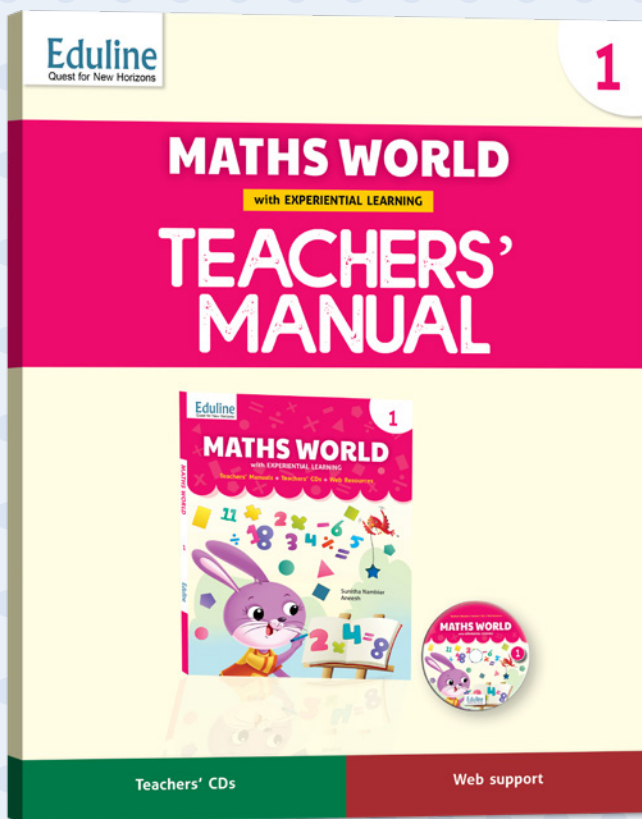
### Everyday Maths

EXPERIENTIAL LEARNING

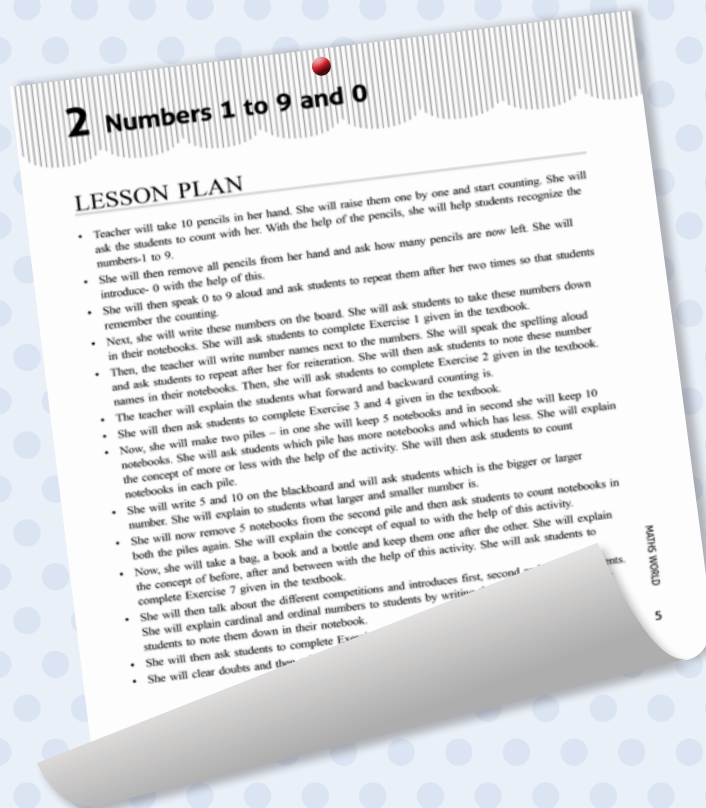
A stamp collection book holds 328 stamps. How many stamps are there in 27 such books?

Book - 3, Page - 108

# Teachers Manuals



Teachers' Manuals include



**LESSON PLAN** with suggestions on how to conduct activities in the classroom

## Teachers' CDs & Apps



e-book



Animation



Activities



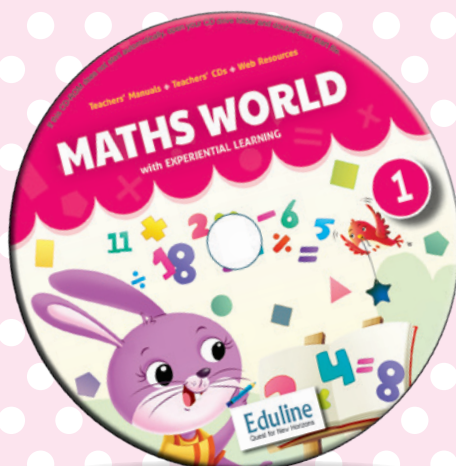
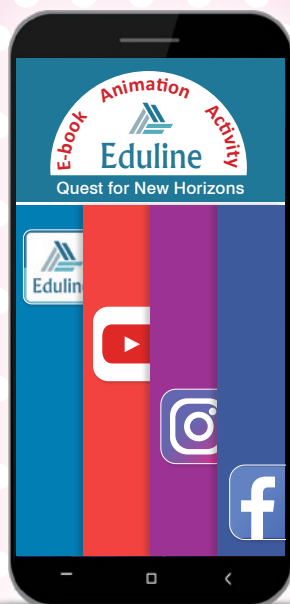
Worksheets



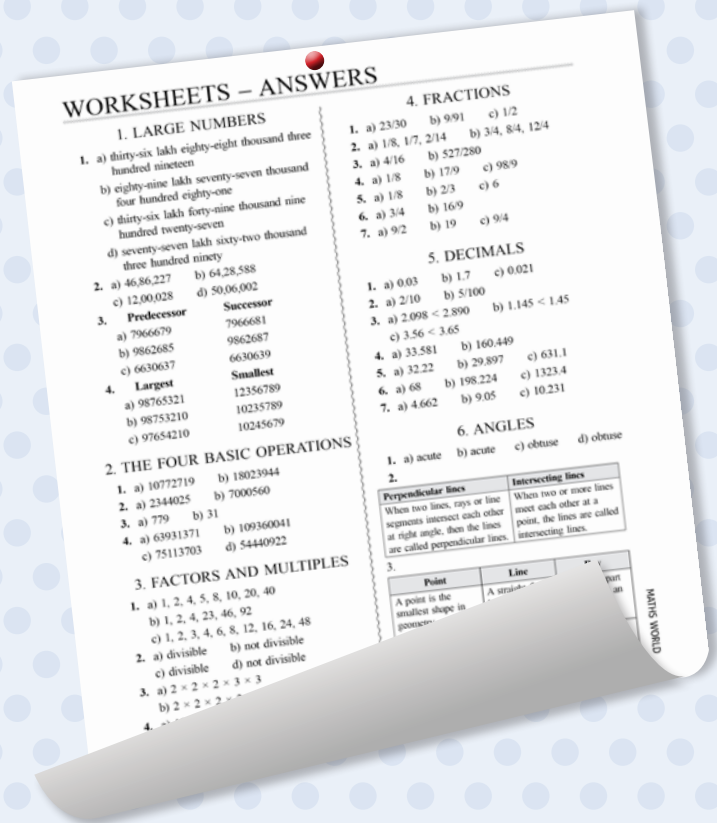
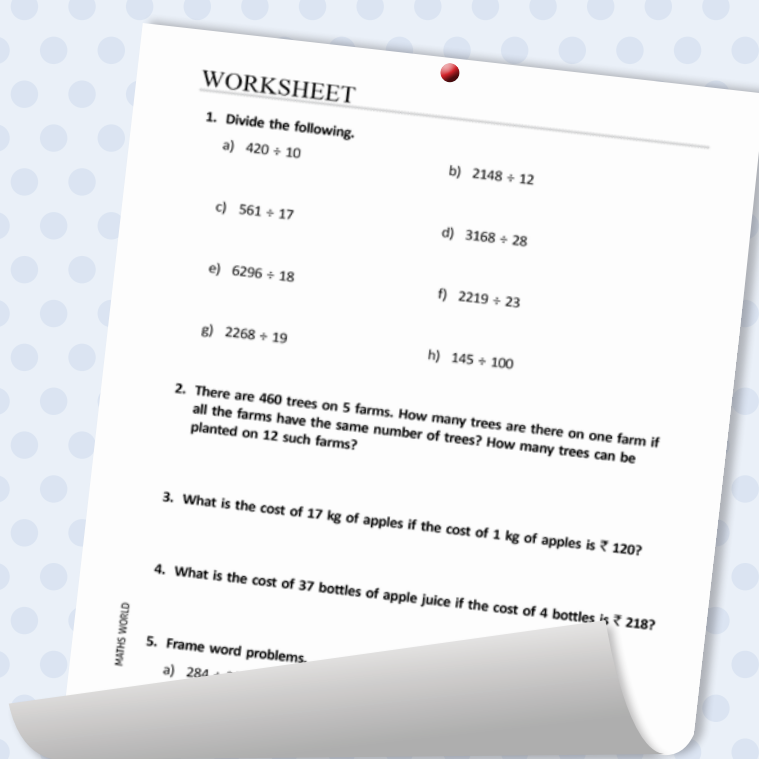
Lesson Plans



Test Generator







**WORKSHEET** for further practice

**ANSWERS** to the worksheets

## Web Resources

WEB SUPPORT a portal provided with each book. Login to find out LESSON PLAN, WORKSHEETS and ANSWER KEYS to the Worksheets which have been specially designed for teachers.

[erct.eduline.co.in](http://erct.eduline.co.in)

**TEACHER LOGIN**

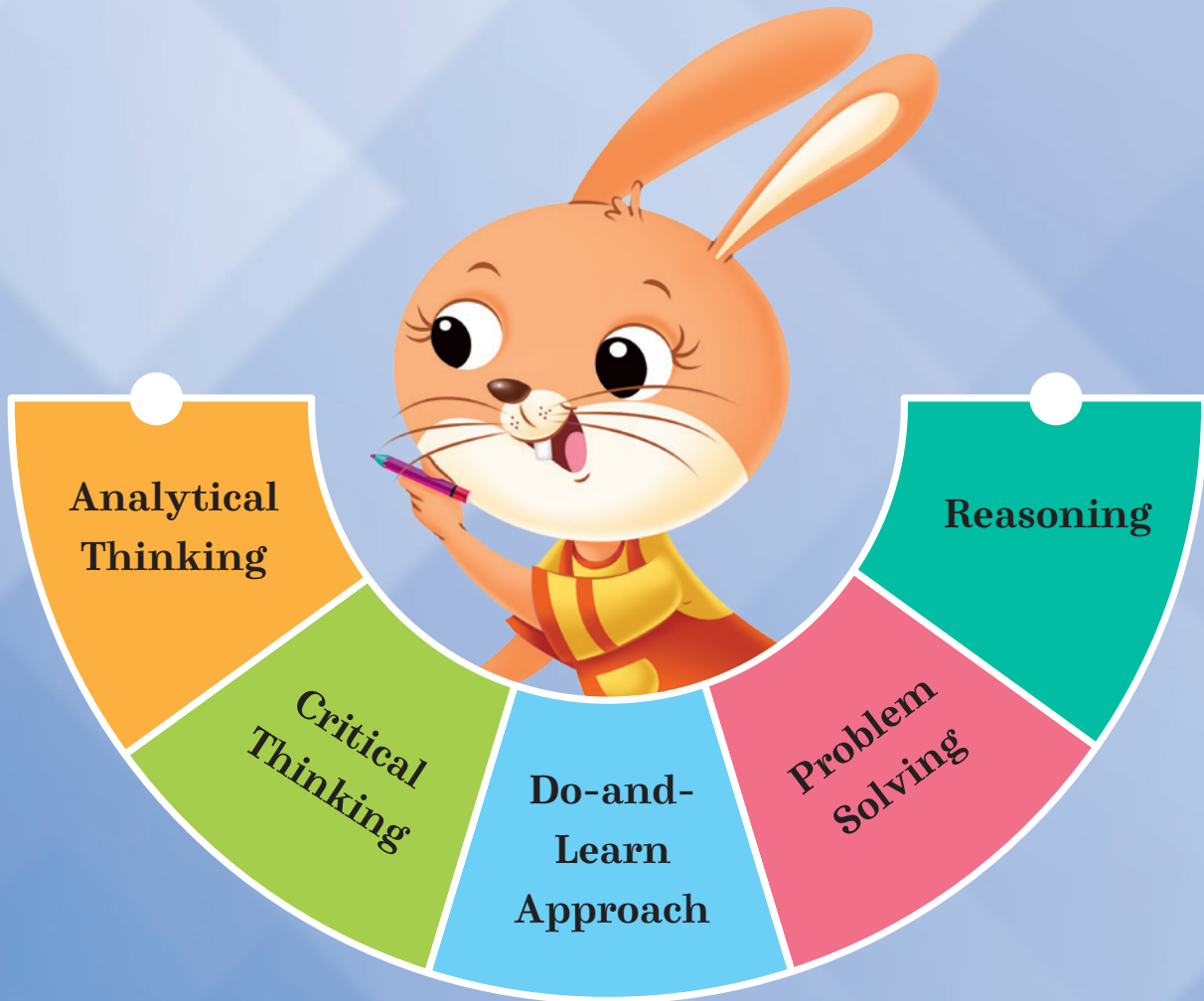
Username:

Password:



# MATHS WORLD

with 21st-CENTURY SKILLS, EXPERIENTIAL LEARNING & VEDIC MATHS



**Start Learning with Us!**

 **EduLine Publishers**

101 Himalika Building, Commercial Complex, Mukherjee Nagar, Delhi 110009

Phone: 011 - 45668333, 79678140, E-mail: [info@eduline.co.in](mailto:info@eduline.co.in); Website: [www.eduline.co.in](http://www.eduline.co.in)