

MATHEMAGIC ACTIVITY BOOK

CLASS - V

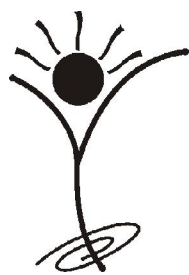
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SYLLABUS GUIDELINES

CLASS – V

Based on CBSE, ICSE & GCSE Syllabus

1. Geometrical Shapes & Spatial Understanding

- Gets the feel of perspective while drawing a 3-D object in 2-D.
- Gets the feel of an angle through observation and paper folding.
- Identifies right angles in the environment.
- Classifies angles into right, acute and obtuse angles.
- Represents right angle, acute angle and obtuse angle by drawing and tracing.
- Explores intuitively rotations and reflections of familiar 2-D shapes.
- Explores intuitively symmetry in familiar 3-D shapes.
- Makes the shapes of cubes, cylinders and cones using nets especially designed for this purpose.

2. Numbers and operations

- Finds place value in numbers beyond 1000.
- Appreciates the role of place value in addition, subtraction and multiplication algorithms.
- Uses informal and standard division algorithms.
- Explains the meaning of factors and multiples.

3. Mental Arithmetic

- Estimates sums, differences, products and quotients and verifies using approximation.

4. Fractional Numbers

- Finds the fractional part of a collection.
- Compares fractions.
- Identifies equivalent fractions.
- Estimates the degree of closeness of a fraction to known fractions ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ etc.)
- Uses decimal fractions in the context of units of length and money.
- Expresses a given fraction in decimal notation and vice versa.

5. Money

- Applies the four operations in solving problems involving money.



**6. Measurement**

- Determines area and perimeter of simple geometrical figures.
- Applies the four operations in solving problems involving length, weight and volume.
- Relates commonly used larger and smaller units of length, weight and volume and converts one to the other.
- Applies simple fractions to quantities.
- Converts fractional larger unit into complete smaller units.
- Appreciates volume of a solid body: intuitively and also by informal measurement.
- Uses addition and subtraction in finding time intervals in simple cases.

**7. Data Handling**

- Collects two-dimensional quantitative data.
- Represents the data in the form of a table.
- Draws a bar graph or a pictograph to present a data.

**8. Patterns**

- Identifies patterns in square numbers, triangular numbers.
- Relates sequences of odd numbers between consecutive square numbers.
- Makes border strip and tiling patterns.

**9. Average, Percentage & Ratio Proportion**

- Average of quantities.
- Finding quantities when ratio is given.
- Uses & application of percentage.

**10. Profit and Loss**

- Cost price & selling price

**11. Circles, Triangles and Quadrilaterals**

- Construction of circle
- Types of triangles.
- Types of quadrilaterals.





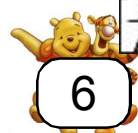
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Activity work sheet



Join The Sequence Of Roman Numbers



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We divide 4 digit numbers in the same way as we divide 3 and 2-digit numbers, starting from the left.

d.

$$\begin{array}{r} 37 \overline{) 8277} \end{array}$$

$$Q =$$
$$R =$$

- c. $158 \div 33 = \boxed{}$ f. $7346 \div 13 = \boxed{}$ i. $519 \div 68 = \boxed{}$

-

- $$r = 4$$

-

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Activity work sheet

Pattern Recognition

1. Extend these patterns and solve the following.

a.

i. $1 + 2 + 3 = 6$

ii. $2 + 3 + 4 = 9$

iii. $3 + 4 + 5 =$

iv. $4 + 5 + 6 =$

v. $5 + 6 + 7 =$

b.

If $(5 \times 5) - (4 \times 4) = 5 + 4 = 9$, then

i. $(89 \times 89) - (88 \times 88) =$

ii. $(254 \times 254) - (253 \times 253) =$

iii. $(305 \times 305) - (304 \times 304) =$

iv. $(9000 \times 9000) - (8999 \times 8999) =$

c.

i. $1 \times 1 = 1$

ii. $11 \times 11 = 121$

iii. $111 \times 111 = 12321$

iv. $1111 \times 1111 =$

v. $11111 \times 11111 =$

vi. $111111 \times 111111 =$

What do you notice about the sum of 3 consecutive numbers? Write it here.

The sum of 3 consecutive numbers is always a of 3.

2.Look at the sum of the first two consecutive odd numbers : $1+3= 4$.

Now multiply the number of numbers by itself. What do you get? $2 \times 2 = 4$, the same answer. Now try the following

a. $1 + 3 + 5 =$

b. $1 + 3 + 5 + 7 =$ $=$

c.The sum of the first 10 consecutive odd numbers $=$

d.The sum of the first 45 consecutive odd numbers $=$

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Activity work sheet

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Rounding Numbers



◆ Round the following numbers to the nearest 10 :

11 25 5 94 66

◆ Round these lengths to the nearest 10m:

75 44 35 55 95

◆ Round the following numbers to the nearest 100 :

101 295 350 156

◆ Round the following weights to the nearest 100 kg

928 346 551 511



We are enjoying doing this.
This is so simple.

◆ Round the following numbers to the nearest 1000

1050 7401 9260 2560
1550 4500 8456 3950

◆ Can you round the following decimals to the nearest whole unit?

1.5 1.3 2.5 6.3
9.4 4.5 8.5 9.9

◆ Write a number between 3000 and 4000 that is nearer to 4000

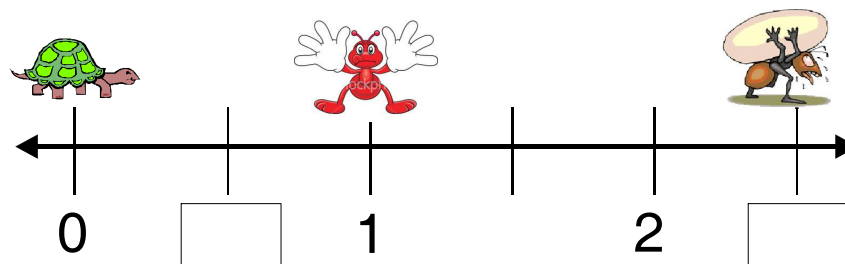
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Numbers On A Line

1. On the number line below, how many equal lengths are between 0 and 1? _____

What is the fraction name for each equal length? _____

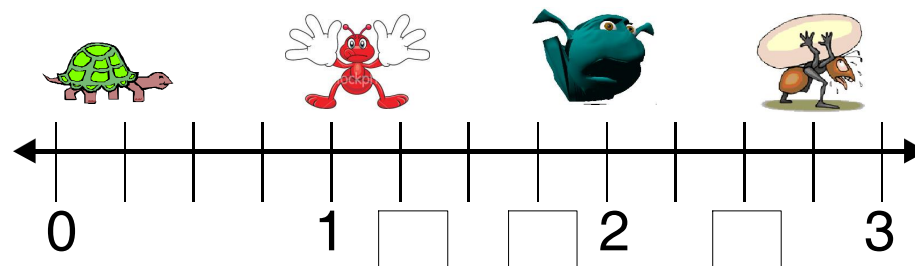
Write the number that belongs in each blank box.



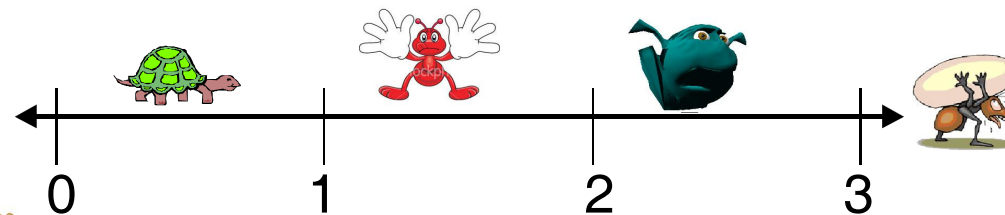
2. On the number line below, how many equal lengths are between 0 and 1?

What is the fraction name for each equal length?

Write the number that belongs in each blank box.



3. On the number line below, place a point on $1\frac{1}{2}$. Shade the line from 0 and $1\frac{1}{2}$.



Activity work sheet

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Playing With Calculator

The numbers in the display window of your calculator are made up of little light bars. On some calculators these glow. On others, they look like numbers printed on paper.

Take your calculator and keep pressing 8 until the display is full. Now you will see all the light bars. Each 8 is made up of 7 bars. The other numbers use fewer bars. The zero, for example, has 6 bars. Put the other numbers in your display - 12345679. Which of these numbers has the same number of bars as the number itself?

Keep the number in your display. Now write down on paper the highest number you can fit on an eight-digit display without using any digit more than once. Take hold of your calculator again and multiply by 8. Surprise, surprise!

The number 12345679 is full of surprises. Try multiplying by 9. This is just too much for your calculator, but you will get a row of 1's. You will get Nine 1's in the answer.

Sit opposite a friend and put 0.7734 in your calculator. You have just passed on a greeting. If you turn your calculator round, you'll see what it says - hELLO. All the numbers in a calculator display may be read as letters if turned upside-down. These "letters" are not exactly right, but they are clear enough to read the message. Try 5993.7108. Upside down, this reads BOIL EGGS. You can make up your own "messages" if you use the following numbers to represents letters.

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