Activities

A Convert the expanded form of a number into its standard form.

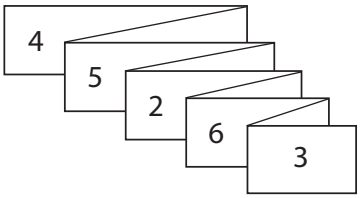
Conceptual Understanding, Experiential Learning

1. Take a sheet of chart paper and cut out a rectangular strip of size 10 cm × 2 cm from it.
2. Divide the strip into five equal parts as shown.

3. Take any 5-digit number and write it in the expanded form. For example, the expanded for 45263 is 40000 + 5000 + 200 + 60 + 3.
4. Write the expanded form on the strip as shown.

40000	5000	200	60	3

5. Fold the strip in such a way that the 0s are not visible. This means that only the standard form of the number is visible, that is, 45263.



4	5	2	6	3

Try this with some other 5-digit numbers.

Note to the teacher: This activity can also be used to find the place values of the digits in a number. When the strip is unfolded, the expanded form of the number and the place values of the digits will be seen.

B Find the product of two numbers by halving and doubling.

Conceptual Understanding, Experiential Learning, Collaboration

1. Work in pairs.
2. Write two numbers to be multiplied in the first row. For example, we consider 49 and 56.
3. Halve the first number (49) and double the second one (56). While you halve the first number, place the quotient in the Halving column without considering the remainder 1.
4. Carry on halving and doubling till you obtain the number 1 in the Halving column.
5. Strike out the rows that have an even number in the Halving column.
6. Add the remaining numbers in the Doubling column to get the product.
   Here, 56 + 896 + 1792 = 2744.

Halving	Doubling
49	56
~~24~~	~~112~~
~~12~~	~~224~~
~~6~~	~~448~~
3	896
1	1792

```
  1  2  1
        5  6
     8  9  6
+ 1  7  9  2
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  2  7  4  4
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product

This method is known as the Russian Peasant Multiplication.

Multiply using this method.

a. 25 × 32 b. 30 × 30
c. 56 × 40 d. 64 × 28

C Find multiples of 2, 3, 4 and 5.

Conceptual Understanding, Experiential Learning, Collaboration

1. Work in groups of four students.
2. Trace a 10 × 10 grid on a sheet of squared paper (Fig. 1). Each square is 1 × 1 units. Similarly, make 5 copies of it.

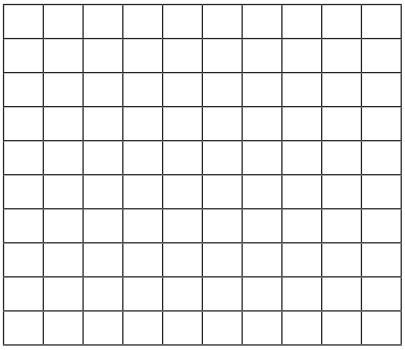


Fig. 1

3. Write numbers from 1 to 100 in one copy (Fig. 2).

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

Fig. 2

4. Take another copy and make holes in alternate squares (Fig. 3).
5. Similarly, make holes after every 2 squares, 3 squares and 4 squares in the remaining 3 sheets (Fig. 4 to Fig. 6).

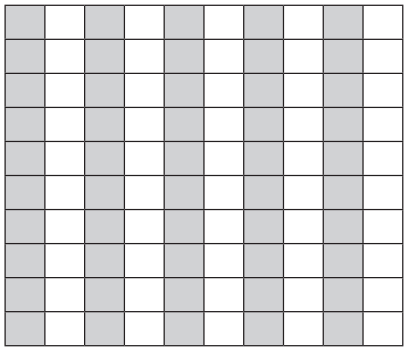


Fig. 3

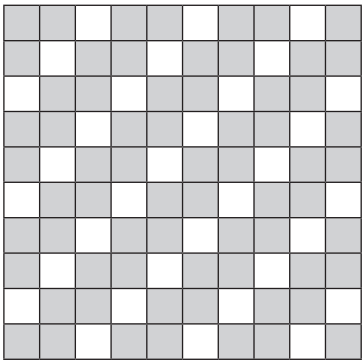


Fig. 4

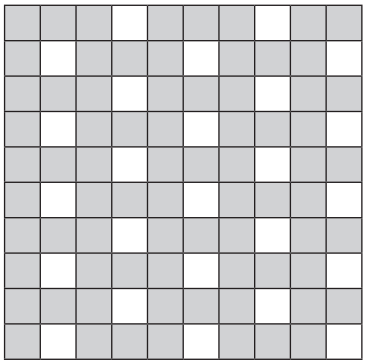


Fig. 5

6. Place the sheet in Figure 3 on the number sheet (Fig. 2). The holes will show multiples of 2.
7. Similarly, to find multiples of 3, 4 and 5, place the sheets in Figures 4, 5, and 6 on the number sheet (Fig. 2) one by one.
8. Record your observations in the given table.

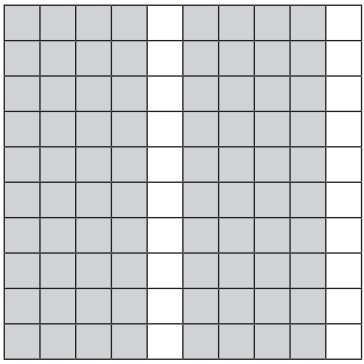


Fig. 6

Number	2	3	4	5
Multiples	2, 4, 6, 8, ...			

You can also use this activity to find the common multiples of two or more numbers. For example, to find the common multiples of 2 and 3, place the sheets in Figures 3 and 4 on the number sheet (Fig. 2). The holes will show the common multiples of 2 and 3.

Similarly, to find the common multiples of 3, 4 and 5, place the sheets in Figures 4, 5 and 6 on the number sheet (Fig. 2). The holes will show the common multiples of 3, 4 and 5.

D Making 3-D shapes

Conceptual Understanding, Experiential Learning, Creativity

To make a cube

1. Draw a rectangle of length 20 cm and width 5 cm on a sheet of paper (Fig. 1).
2. Divide the rectangle into 4 squares of side 5 cm each (Fig. 2).

Fig. 1

Fig. 2

3. Draw a square of side 5 cm on top of the second square and another of the same size below the third square (Fig. 3).
4. Cut out the shape so formed along the solid outline.

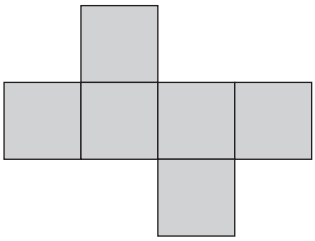


Fig. 3

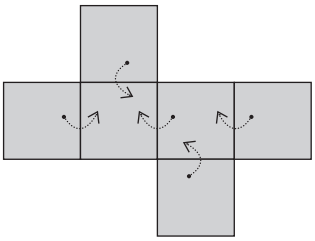


Fig. 4

5. Fold each square inward along the lines (Fig. 4).
6. Join the open edges with Sellotape. Your cube is ready (Fig. 5).

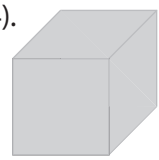


Fig. 5

To make a cuboid

1. Draw a rectangle of length 24 cm and width 20 cm (Fig. 1). Divide it into 4 equal rectangles of size 24 cm × 5 cm (Fig. 2).

Fig. 1

Fig. 2

2. Draw a square of side 5 cm at each end of the second rectangle (Fig. 3).
3. Cut out the shape drawn along the outline.
4. Fold inward along the edges as shown (Fig. 4). Join the edges with Sellotape. Your cuboid is ready (Fig. 5).

Fig. 3

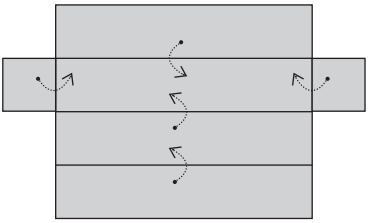


Fig. 4

Fig. 5

To make a prism

1. Draw a rectangle of length 24 cm and width 15 cm. Divide it into 3 equal rectangles of size 24 cm × 5 cm (Fig. 1).
2. Draw an equilateral triangle of side 5 cm at each end of the second rectangle (Fig. 2).

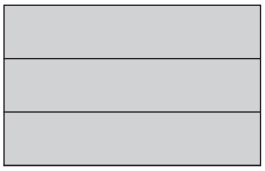


Fig. 1

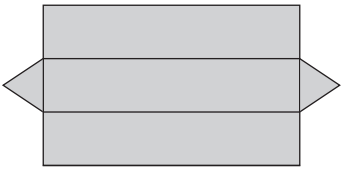


Fig. 2

3. Cut out the shape drawn along the outline.
4. Fold along the edges as shown (Fig. 3). Join the edges with Sellotape. Your prism is ready (Fig. 4).

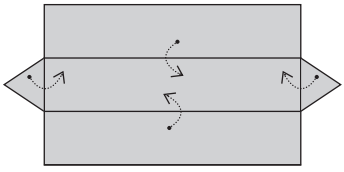


Fig. 3

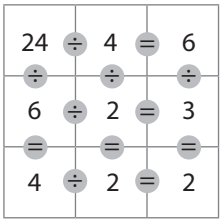
Fig. 4

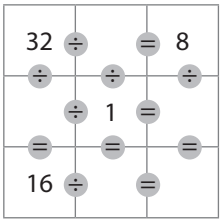
Projects

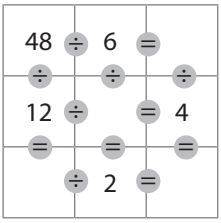
A Division sums

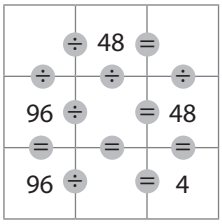
Conceptual Understanding, Experiential Learning, Collaboration

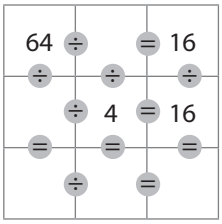
Look at each grid. Each row and each column in it have a division sum. Fill in the missing numbers in each sum. Similarly, prepare division sums and then share them in the class.

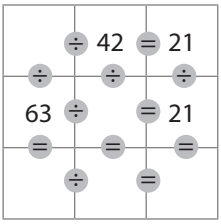












B Multiplication by 25

Conceptual Understanding, Experiential Learning

Consider any number and multiply it by 100. Divide the product by 4. This will give the product of the number multiplied by 25.

For example, find the product of 36 × 25.

Step 1: Multiply 36 by 100. $36 \times 100 = 3600$

Step 2: Divide the product by 4. $3600 \div 4 = 900$

So, $36 \times 25 = 900$

Similarly, you can find these products.

a. 63×25 b. 98×25

c. 124×25 d. 150×25

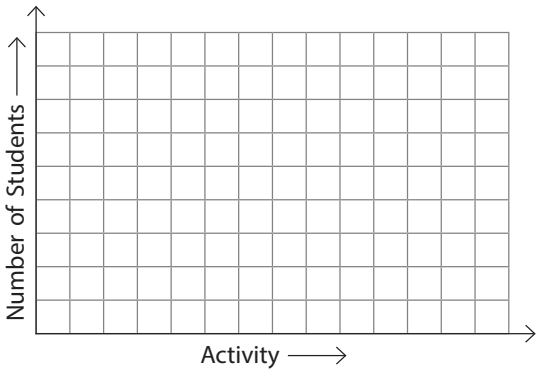
C Collect data and represent it as a bar graph.

Conceptual Understanding, Experiential Learning, Collaboration

1. Draw a table as shown. Ask your classmates about their favourite activity. Record your findings in the table.

Activity	Dancing	Singing	Gardening	Board Games	Art
Number of students					

2. Take a sheet of squared paper.
3. Give a title to the bar graph.
4. Draw bars to represent the number of students in each activity.



Find out the activity that is taken up by the most number of students. Also find out the activity that is taken up by the least number of students.

D Count the number of boys and girls in your class and fill in the blanks.

Conceptual Understanding, Experiential Learning, Collaboration

Number of boys = _____ Number of girls = _____

Total number of students = _____

Fraction for the number of boys = _____

Fraction for the number of girls = _____

The fractions you wrote above are _____ (unit/like/unlike) fractions.