

CLASS NOTES

Class: IV

Topic: Play with Patterns

Subject: MATHS

Chapter-10
WORKBOOK

Note: Write the given work in maths workbook.

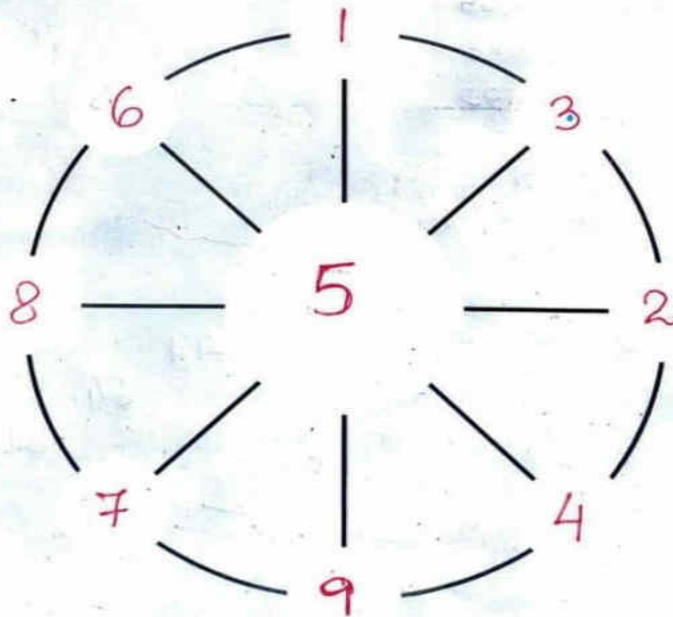
11. (a) Magic Square

Using numbers from 1 to 9 only once, complete the grid in such a way that the sum of each row, column and diagonal is 15.

8	1	6
3	5	7
4	9	2

(b) Magic Wheel

Write the numbers from 1 to 9 in such a way that the sum of 3 numbers in a row is 15.



ADDITION PATTERNS

1. Add till you see a pattern. Then complete the following series :

(a) $1 + 2 + 3 = 6$
 $2 + 3 + 4 = 9$
 $3 + 4 + 5 = 12$
 $4 + 5 + 6 = 15$
 $5 + 6 + 7 = 18$
 $6 + 7 + 8 = 21$
 $7 + 8 + 9 = 24$
 $8 + 9 + 10 = 27$

(b) $1 + 2 + 3 + 4 = 10$
 $2 + 3 + 4 + 5 = 14$
 $3 + 4 + 5 + 6 = 18$
 $4 + 5 + 6 + 7 = 22$
 $5 + 6 + 7 + 8 = 26$
 $6 + 7 + 8 + 9 = 30$
 $7 + 8 + 9 + 10 = 34$
 $8 + 9 + 10 + 11 = 38$

(c) $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55$

$11 \text{ to } 20 = 155$

$21 \text{ to } 30 = 255$

$31 \text{ to } 40 = 355$

$41 \text{ to } 50 = 455$

$51 \text{ to } 60 = 555$

$61 \text{ to } 70 = 655$

(d) $1 + 3 = 4$

$1 + 3 + 5 = 9$

$1 + 3 + 5 + 7 = 16$

$1 + 3 + 5 + 7 + 9 = 25$

$1 + 3 + 5 + 7 + 9 + 11 = 36$

$1 + 3 + 5 + 7 + 9 + 11 + 13 = 49$

$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 = 64$

$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 = 81$

$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 = 100$

(e) Look at the 'Add 99' Track. Find the pattern to complete the track.



PATTERNS IN MULTIPLICATION

1. Study the pattern to come up with the answer:

(a) $3 \times 3 = 9$

$$33 \times 33 = 1089$$

$$333 \times 333 = 110889$$

$$3333 \times 3333 = 11108889$$

$$33333 \times 33333 = 1111088889$$

$$333333 \times 333333 = 111110888889$$

(b) $5 \times 5 = 25$

$$35 \times 35 = 1225$$

$$335 \times 335 = 112225$$

$$3335 \times 3335 = 11122225$$

$$33335 \times 33335 = 1111222225$$

(c) $37 \times 3 \times 1 = 111$

$$37 \times 3 \times 2 = 222$$

$$37 \times 3 \times 3 = 333$$

$$37 \times 3 \times 4 = 444$$

$$37 \times 3 \times 5 = 555$$

$$37 \times 3 \times 6 = 666$$

(d) $9 \times 9 = 81$

$$99 \times 9 = 891$$

$$999 \times 9 = 8991$$

$$9999 \times 9 = 89991$$

$$99999 \times 9 = 899991$$

$$999999 \times 9 = 8999991$$

(e) $9 \times 0 + 1 = 1$

$$9 \times 1 + 2 = 11$$

$$9 \times 2 + 3 = 21$$

$$9 \times 3 + 4 = 31$$

$$9 \times 4 + 5 = 41$$

$$9 \times 5 + 6 = 51$$

(f) $(2 \times 2) - (1 \times 1) = 2 + 1$

$$(3 \times 3) - (2 \times 2) = 3 + 2$$

$$(4 \times 4) - (3 \times 3) = 4 + 3$$

$$(5 \times 5) - (4 \times 4) = 5 + 4$$

$$(6 \times 6) - (5 \times 5) = 6 + 5$$

$$(7 \times 7) - (6 \times 6) = 7 + 6$$

DIVISION PATTERNS

Observe the pattern and find your answer:

1.

$8 \div 4 = 2$	$9 \div 3 = 3$
$80 \div 4 = 20$	$90 \div 3 = 30$
$800 \div 4 = 200$	$900 \div 3 = 300$
$8000 \div 4 = 2000$	$9000 \div 3 = 3000$
$80,000 \div 4 = 20,000$	$90,000 \div 3 = 30,000$


2.

$80,000 \div 4 = 20,000$	$120,000 \div 4 = 30,000$
$80,000 \div 40 = 2000$	$120,000 \div 40 = 3,000$
$80,000 \div 400 = 200$	$120,000 \div 400 = 300$
$80,000 \div 4000 = 20$	$120,000 \div 4000 = 30$
$80,000 \div 40,000 = 2$	$120,000 \div 40,000 = 3$

3.

$$(9-1) \div 8 = 1$$
$$(98-2) \div 8 = 12$$
$$(987-3) \div 8 = 123$$
$$(9876-4) \div 8 = 1234$$
$$(98765-5) \div 8 = 12345$$
$$(987654-6) \div 8 = 123456$$
$$(9876543-7) \div 8 = 1234567$$

FLOOR PATTERNS

1. Using the shape  cover the floor with this tile: *DO IT YOURSELF*

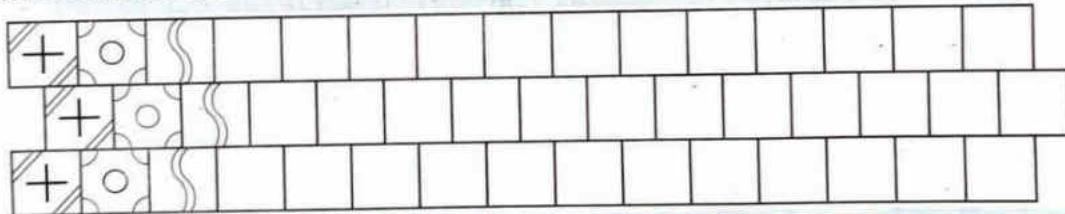


Colour each tile in a different colour

2. Complete the pattern and colour it.



3. Complete the pattern on the bricks of this wall. Colour each brick in a different colour.



CODED MESSAGES

See the following Code

F	L	Y	I	N	G	S	A	U	C	E	R
1	2	3	4	5	6	7	8	9	10	11	12

Find the value of the following words by multiplying the numbers that each letter represents: *DO IT YOURSELF*

IF	$4 \times 1 = 4$	RAN
ANY	$8 \times 5 \times 3 = 120$	GAS
LIE	$2 \times 4 \times 11 = 88$	FIG

The above content has been absolutely prepared at home.