



MATH GENIE

Formula & Table Book **LEVEL-1**



★ SHAINA'S FIRST MATH ADVENTURE ★

PREPARED EXCLUSIVELY FOR

Shaina Rana



Guardian: Sohel Rana

OFFICIAL SIGNATURE OF SHAINA



EXCLUSIVE DIGITAL ACCESS

- Free NEET/IIT Foundation App
- Free Olympiad Exam (w/ E-Certificate)

✓ Offer valid only for owner: Shaina



SCAN NOW

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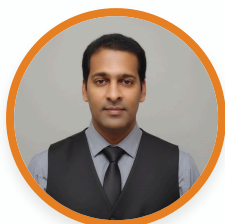
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Dr. Sohel Rana

Founder

www.thelifenavigator.com

Inventor of "User-Name Specific Learning"

WELCOME, YOUNG MATH GENIUS!

Dear Student **Shaina** and **Sohel Rana**,

Congratulations! This is not just a book; it is a **Magic Key** created especially for YOU. I am Dr. Sohel Rana, and I invented this special way of learning where **YOU are the Hero** of every math story. When you see your name in a problem, your brain wakes up! You don't just calculate; you *feel* the numbers.



Student Outcomes

- **Hero Mode:** You play roles like Doctor, Pilot, & Chef.
- **Hyper-Focus:** Your name keeps you alert.
- **Retention:** You remember what you experience.
- **Joyful Learning:** No stress, just fun puzzles!

IN Real NEP 2020 Meaning





- **Competency-Based:** Moving away from rote memorization to real understanding.
- **Experiential Learning:** Learning by "doing" and role-playing scenarios.
- **Integrated Pedagogy:** Connecting Math with daily life skills.



Parent Guide: Use this as the official **Level-1 Foundation**. Please ensure the student completes the corresponding tasks in the **Worksheet Level-1 Book**.



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SCAN TO UNLOCK



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ADVENTURE MAP

✓ NEP 2020 Ready

"Detective Shaina, your mission starts now!"

UNIT 1: THE OPERATORS

01. Addition



"Agent Shaina gathers the score!"

02. Subtraction



"Detective Shaina finds the clue!"

03. Division



"Captain Shaina shares fairly."

04. Multiplication



"Racer Shaina speeds up!"

UNIT 2: NUMBER SENSE

05. Fractions



"Chef Shaina slices the pie."

06. Properties



"Scientist Shaina cracks codes."

07. Money Manager



"Banker Shaina saves gold."

UNIT 3: LIFE SKILLS

08. Data Handling



"Analyst Shaina sees patterns."

09. Meas. of Time



"Time Lord Shaina travels."

10. Days & Months



"Planner Shaina sets the date."

11. Measurement



"Architect Shaina builds it."

UNIT 4: FUTURE DIRECTION

12. Cheat Codes



"Professor Shaina's formulas."

13. Math Symbols



"Explorer Shaina reads signs."

14. Graduation Day



"Champion Shaina wins big!"

😊 "Math is not scary, it is your Superpower!" 😊



Addition Tables (1-5)

Addition means "Putting Together", Shaina!

ADD TO 1	
$1 + 1$	2
$1 + 2$	3
$1 + 3$	4
$1 + 4$	5
$1 + 5$	6
$1 + 6$	7
$1 + 7$	8
$1 + 8$	9
$1 + 9$	10
$1 + 10$	11

ADD TO 2	
$2 + 1$	3
$2 + 2$	4
$2 + 3$	5
$2 + 4$	6
$2 + 5$	7
$2 + 6$	8
$2 + 7$	9
$2 + 8$	10
$2 + 9$	11
$2 + 10$	12

ADD TO 3	
$3 + 1$	4
$3 + 2$	5
$3 + 3$	6
$3 + 4$	7
$3 + 5$	8
$3 + 6$	9
$3 + 7$	10
$3 + 8$	11
$3 + 9$	12
$3 + 10$	13

ADD TO 4	
$4 + 1$	5
$4 + 2$	6
$4 + 3$	7
$4 + 4$	8
$4 + 5$	9
$4 + 6$	10
$4 + 7$	11
$4 + 8$	12
$4 + 9$	13
$4 + 10$	14

ADD TO 5	
$5 + 1$	6
$5 + 2$	7
$5 + 3$	8
$5 + 4$	9
$5 + 5$	10
$5 + 6$	11
$5 + 7$	12
$5 + 8$	13
$5 + 9$	14
$5 + 10$	15



THE LITTLE COLLECTOR

Target: Addition & Grouping



Blue Racers

/1

Shaina has **3 Blue Cars**.
Dad gives **4 Red Cars**.

$$\bullet\bullet\bullet + \bullet\bullet\bullet\bullet$$

$$3 + 4 = 7$$



Garden Party

/1

You see **5 Sunflowers**.
You plant **5 Roses**.

$$\bullet\bullet\bullet\bullet\bullet + \bullet\bullet\bullet\bullet\bullet$$

$$5 + 5 = 10$$



My Gullak

/1

Gullak has **₹8** inside.
Add a **₹2 Coin**.



$$8 + 2 = 10$$



Shaina's Book

/1

Shaina has **6 Stars**.
Mom buys **3 Hearts**.

$$\bullet\bullet\bullet\bullet\bullet\bullet + \bullet\bullet\bullet$$

$$6 + 3 = 9$$



Brain Gym

Did you know? **Zero (0)** is a hero! If you add 0 to any number, the number stays the same. ($5 + 0 = 5$).



Parent Tip

Use real coins or buttons to practice these sums at home with Shaina.



Addition Tables (6-10)

Keep climbing the ladder, Shaina!

ADD TO 6	
$6 + 1$	7
$6 + 2$	8
$6 + 3$	9
$6 + 4$	10
$6 + 5$	11
$6 + 6$	12
$6 + 7$	13
$6 + 8$	14
$6 + 9$	15
$6 + 10$	16

ADD TO 7	
$7 + 1$	8
$7 + 2$	9
$7 + 3$	10
$7 + 4$	11
$7 + 5$	12
$7 + 6$	13
$7 + 7$	14
$7 + 8$	15
$7 + 9$	16
$7 + 10$	17

ADD TO 8	
$8 + 1$	9
$8 + 2$	10
$8 + 3$	11
$8 + 4$	12
$8 + 5$	13
$8 + 6$	14
$8 + 7$	15
$8 + 8$	16
$8 + 9$	17
$8 + 10$	18

ADD TO 9	
$9 + 1$	10
$9 + 2$	11
$9 + 3$	12
$9 + 4$	13
$9 + 5$	14
$9 + 6$	15
$9 + 7$	16
$9 + 8$	17
$9 + 9$	18
$9 + 10$	19

ADD TO 10	
$10 + 1$	11
$10 + 2$	12
$10 + 3$	13
$10 + 4$	14
$10 + 5$	15
$10 + 6$	16
$10 + 7$	17
$10 + 8$	18
$10 + 9$	19
$10 + 10$	20



Score & Shop

Cricket Umpire



Umpire **Shaina**, count the runs.

Over 1: **6 Runs** (A Six!)

Over 2: **7 Runs** (Running hard!)

$$6 + 7 = 13$$

Total Runs

Vegetable Market



Potatoes weigh **8 kg**. Onions weigh **5 kg**.

Total Weight:

$$8 + 5 = 13 \text{ kg}$$



Festival of Lights

9 Diyas on balcony. **9 Diyas** at door.

Total: $9 + 9 = 18$ Diyas!

"Adding helps us grow, Shaina!"



SUBTRACTION TABLES (1-5)

Shaina's Rule: Subtraction means "Taking Away"!

Minus 1	
1 - 1	0
2 - 1	1
3 - 1	2
4 - 1	3
5 - 1	4
6 - 1	5
7 - 1	6
8 - 1	7
9 - 1	8
10 - 1	9
11 - 1	10

Minus 2	
2 - 2	0
3 - 2	1
4 - 2	2
5 - 2	3
6 - 2	4
7 - 2	5
8 - 2	6
9 - 2	7
10 - 2	8
11 - 2	9
12 - 2	10

Minus 3	
3 - 3	0
4 - 3	1
5 - 3	2
6 - 3	3
7 - 3	4
8 - 3	5
9 - 3	6
10 - 3	7
11 - 3	8
12 - 3	9
13 - 3	10

Minus 4	
4 - 4	0
5 - 4	1
6 - 4	2
7 - 4	3
8 - 4	4
9 - 4	5
10 - 4	6
11 - 4	7
12 - 4	8
13 - 4	9
14 - 4	10

Minus 5	
5 - 5	0
6 - 5	1
7 - 5	2
8 - 5	3
9 - 5	4
10 - 5	5
11 - 5	6
12 - 5	7
13 - 5	8
14 - 5	9
15 - 5	10

→ Turn the page to open your Personal Shop!



SHAINA'S SUPER STORE

RECEIPT #001 • SUBTRACTION SALE



Customer: Sohel Rana

Order: 1

Gave you ₹10.
Bought Candy for ₹4.



$$\text{CHANGE: } 10 - 4 = ₹6$$



Customer: Best Friend

Order: 2

Gave you ₹15.
Bought Ball for ₹5.



$$\text{CHANGE: } 15 - 5 = ₹10$$



Shaina's Stock



You had 12 Eggs.
Oh no! 2 broke.



$$\text{LEFT: } 12 - 2 = 10$$



Shaina's Wallet



You have ₹9.
Buy ice-cream for ₹3.



$$\text{LEFT: } 9 - 3 = ₹6$$



Shopkeeper Tip:

To subtract quickly, count backwards! For $10 - 2$, think "10... 9, 8".



Fun Fact:

Barcodes on items are like secret languages that tell the computer the price!



SUBTRACTION TABLES (6-10)

Next Level: Big numbers are just small numbers disguising themselves!

Minus 6	
6 - 6	0
7 - 6	1
8 - 6	2
9 - 6	3
10 - 6	4
11 - 6	5
12 - 6	6
13 - 6	7
14 - 6	8
15 - 6	9
16 - 6	10

Minus 7	
7 - 7	0
8 - 7	1
9 - 7	2
10 - 7	3
11 - 7	4
12 - 7	5
13 - 7	6
14 - 7	7
15 - 7	8
16 - 7	9
17 - 7	10

Minus 8	
8 - 8	0
9 - 8	1
10 - 8	2
11 - 8	3
12 - 8	4
13 - 8	5
14 - 8	6
15 - 8	7
16 - 8	8
17 - 8	9
18 - 8	10

Minus 9	
9 - 9	0
10 - 9	1
11 - 9	2
12 - 9	3
13 - 9	4
14 - 9	5
15 - 9	6
16 - 9	7
17 - 9	8
18 - 9	9
19 - 9	10

Minus 10	
10 - 10	0
11 - 10	1
12 - 10	2
13 - 10	3
14 - 10	4
15 - 10	5
16 - 10	6
17 - 10	7
18 - 10	8
19 - 10	9
20 - 10	10



Magic Trick for 10:

When you subtract 10, the last digit stays the same!
(Example: $14 - 10 = 4$)



Target Chase & Travel

The Cricket Chase



Captain **Shaina** is batting. The team needs **20 Runs** to win. You just hit a **SIX (6)**!

Target		Shot		Needed
20	-	6	=	14

$$(20 - 6 = 14)$$

Story Time



Your favorite storybook has **18 Pages**. You have already read **9 Pages** before sleeping.

$$18 - 9 = \underline{9}$$

9 Pages left to read!

The Gullak (Piggy Bank)



You had ₹17. You took out ₹7 for ice cream.
How much is left? $17 - 7 = ₹10$.

"Subtracting makes space for new things, Shaina!"



÷ THE ART OF SHARING

"Shaina's Guide to Fair Sharing" (Tables 1-5)

Divide by 1	
$1 \div 1$	1
$2 \div 1$	2
$3 \div 1$	3
$4 \div 1$	4
$5 \div 1$	5
$6 \div 1$	6
$7 \div 1$	7
$8 \div 1$	8
$9 \div 1$	9
$10 \div 1$	10

Divide by 2	
$2 \div 2$	1
$4 \div 2$	2
$6 \div 2$	3
$8 \div 2$	4
$10 \div 2$	5
$12 \div 2$	6
$14 \div 2$	7
$16 \div 2$	8
$18 \div 2$	9
$20 \div 2$	10

Divide by 3	
$3 \div 3$	1
$6 \div 3$	2
$9 \div 3$	3
$12 \div 3$	4
$15 \div 3$	5
$18 \div 3$	6
$21 \div 3$	7
$24 \div 3$	8
$27 \div 3$	9
$30 \div 3$	10

Divide by 4	
$4 \div 4$	1
$8 \div 4$	2
$12 \div 4$	3
$16 \div 4$	4
$20 \div 4$	5
$24 \div 4$	6
$28 \div 4$	7
$32 \div 4$	8
$36 \div 4$	9
$40 \div 4$	10

Divide by 5	
$5 \div 5$	1
$10 \div 5$	2
$15 \div 5$	3
$20 \div 5$	4
$25 \div 5$	5
$30 \div 5$	6
$35 \div 5$	7
$40 \div 5$	8
$45 \div 5$	9
$50 \div 5$	10

Shaina's Secret Check:



Want to be 100% sure? Go backwards!

If $10 \div 2 = 5$, then 5×2 must be 10. It works every time!

Shaina's Pizza Rule:



Division is like sharing a pizza! If you have **10 slices** and **2 people** (You and Sohel Rana), everyone gets **5 slices**!



Kitchen Captain Challenge



The "Aloo Paratha" Mission

Chef Shaina, today is a special breakfast!
Sohel Rana has cooked hot Parathas, and you need to serve them equally so everyone is happy.

The Hot Pot



15 Parathas



3 Hungry People

(You, Sohel Rana, Sibling)

Result: 5 Parathas per plate!

$$\text{Math: } 15 \div 3 = 5$$

"Great job Chef! Now try dividing 20 Parathas among 4 people."



MASTERING THE GROUPS

"Shaina's Big League Division" (Tables 6-10)

Divide by 6	
$6 \div 6$	1
$12 \div 6$	2
$18 \div 6$	3
$24 \div 6$	4
$30 \div 6$	5
$36 \div 6$	6
$42 \div 6$	7
$48 \div 6$	8
$54 \div 6$	9
$60 \div 6$	10

Divide by 7	
$7 \div 7$	1
$14 \div 7$	2
$21 \div 7$	3
$28 \div 7$	4
$35 \div 7$	5
$42 \div 7$	6
$49 \div 7$	7
$56 \div 7$	8
$63 \div 7$	9
$70 \div 7$	10

Divide by 8	
$8 \div 8$	1
$16 \div 8$	2
$24 \div 8$	3
$32 \div 8$	4
$40 \div 8$	5
$48 \div 8$	6
$56 \div 8$	7
$64 \div 8$	8
$72 \div 8$	9
$80 \div 8$	10

Divide by 9	
$9 \div 9$	1
$18 \div 9$	2
$27 \div 9$	3
$36 \div 9$	4
$45 \div 9$	5
$54 \div 9$	6
$63 \div 9$	7
$72 \div 9$	8
$81 \div 9$	9
$90 \div 9$	10

Divide by 10	
$10 \div 10$	1
$20 \div 10$	2
$30 \div 10$	3
$40 \div 10$	4
$50 \div 10$	5
$60 \div 10$	6
$70 \div 10$	7
$80 \div 10$	8
$90 \div 10$	9
$100 \div 10$	10



Shaina's Magic Zero Trick:

Dividing by 10 is the easiest! If a number ends in **0** (like 70), just **hide the 0** with your finger. What's left? **7**! ($70 \div 10 = 7$).



Shaina's Number Family:

Numbers stick together in a family of 3!

If $56 \div 8 = 7$, then $56 \div 7$ will always be **8**. They never leave the group!



Holiday Fun Games

Cousins & Calculations

It's holiday time! Solve these to keep the peace.



The Mango Box



- Total Mangoes: **24**
- Number of Cousins: **6**

$$24 \div 6 = 4$$

Everyone gets 4 Mangoes!



Ludo Game



- Total Tokens (Gotis): **16**
- Players (Colors): **4**

$$16 \div 4 = 4$$

4 Tokens per player.



Gully Cricket Teams

Captain Shaina needs to make teams.

There are **22 Kids** in the park. You want to make **2 Teams**.

$$\underline{\hspace{2cm}} \div \underline{2} = \underline{\hspace{2cm}}$$

(Write the answer: $22 \div 2 = 11$)

"Good sharing makes great friends, Shaina!"



★ Focus Mode: Shaina

MULTIPLICATION TABLES (2-7)

Table of 2	
2×1	2
2×2	4
2×3	6
2×4	8
2×5	10
2×6	12
2×7	14
2×8	16
2×9	18
2×10	20

Table of 3	
3×1	3
3×2	6
3×3	9
3×4	12
3×5	15
3×6	18
3×7	21
3×8	24
3×9	27
3×10	30

Table of 4	
4×1	4
4×2	8
4×3	12
4×4	16
4×5	20
4×6	24
4×7	28
4×8	32
4×9	36
4×10	40

Table of 5	
5×1	5
5×2	10
5×3	15
5×4	20
5×5	25
5×6	30
5×7	35
5×8	40
5×9	45
5×10	50

Table of 6	
6×1	6
6×2	12
6×3	18
6×4	24
6×5	30
6×6	36
6×7	42
6×8	48
6×9	54
6×10	60

Table of 7	
7×1	7
7×2	14
7×3	21
7×4	28
7×5	35
7×6	42
7×7	49
7×8	56
7×9	63
7×10	70

→ Turn page for Mission Mode!



Mission: Mathematics

CHIEF DOCTOR ID

#8021



Dr. Shaina, you have 2 patients. Each patient needs 2 pills.

? Task: Total pills needed?

Visualizer: 2×4



2 rows

4 cols

Total: 8

Speed Track

$$7 \times 5 =$$

$$4 \times 8 =$$

$$2 \times 2 =$$

The Missing Link (Table of 3)

Find the missing number in the sequence:

6 \rightarrow 9 \rightarrow ? \rightarrow 15

BRAIN GYM

Tip: Order doesn't matter! 3×5 is the same as 5×3 .

Fact: Zero is the only number that cannot be a Roman numeral.



★ Focus Mode: Shaina

MULTIPLICATION TABLES (8-13)

Table of 8	
8×1	8
8×2	16
8×3	24
8×4	32
8×5	40
8×6	48
8×7	56
8×8	64
8×9	72
8×10	80

Table of 9	
9×1	9
9×2	18
9×3	27
9×4	36
9×5	45
9×6	54
9×7	63
9×8	72
9×9	81
9×10	90

Table of 10	
10×1	10
10×2	20
10×3	30
10×4	40
10×5	50
10×6	60
10×7	70
10×8	80
10×9	90
10×10	100

Table of 11	
11×1	11
11×2	22
11×3	33
11×4	44
11×5	55
11×6	66
11×7	77
11×8	88
11×9	99
11×10	110

Table of 12	
12×1	12
12×2	24
12×3	36
12×4	48
12×5	60
12×6	72
12×7	84
12×8	96
12×9	108
12×10	120

Table of 13	
13×1	13
13×2	26
13×3	39
13×4	52
13×5	65
13×6	78
13×7	91
13×8	104
13×9	117
13×10	130

→ Turn page for Mission Mode!



Mission: Mathematics

POLICE INSPECTOR ID

#7679



Inspector Shaina! We found 8 footprints. Each footprint has 4 toes.

? Task: Total toes found?

Visualizer: 8×4



8 rows

4 cols

Total: 32

Speed Track

$$13 \times 5 =$$

$$10 \times 8 =$$

$$8 \times 8 =$$

The Missing Link (Table of 9)

Find the missing number in the sequence:

18 → 27 → ? → 45

BRAIN GYM

Tip: Any number multiplied by 1 stays the same.

Fact: A hexagon is a shape with 6 sides.



★ Focus Mode: Shaina

MULTIPLICATION TABLES (14-19)

Table of 14

14×1	14
14×2	28
14×3	42
14×4	56
14×5	70
14×6	84
14×7	98
14×8	112
14×9	126
14×10	140

Table of 15

15×1	15
15×2	30
15×3	45
15×4	60
15×5	75
15×6	90
15×7	105
15×8	120
15×9	135
15×10	150

Table of 16

16×1	16
16×2	32
16×3	48
16×4	64
16×5	80
16×6	96
16×7	112
16×8	128
16×9	144
16×10	160

Table of 17

17×1	17
17×2	34
17×3	51
17×4	68
17×5	85
17×6	102
17×7	119
17×8	136
17×9	153
17×10	170

Table of 18

18×1	18
18×2	36
18×3	54
18×4	72
18×5	90
18×6	108
18×7	126
18×8	144
18×9	162
18×10	180

Table of 19

19×1	19
19×2	38
19×3	57
19×4	76
19×5	95
19×6	114
19×7	133
19×8	152
19×9	171
19×10	190

→ Turn page for Mission Mode!



Mission: Mathematics

SPACE COMMANDER ID

#3661



Commander Shaina! 14 aliens landed. Each alien has 6 eyes.

? Task: Total alien eyes?

Visualizer: 8×4



8 rows

4 cols

Total: 32

Speed Track

$$19 \times 5 =$$

$$16 \times 8 =$$

$$14 \times 14 =$$

The Missing Link (Table of 15)

Find the missing number in the sequence:

30 \rightarrow 45 \rightarrow ? \rightarrow 75

BRAIN GYM

Tip: Any number multiplied by 0 is always 0.

Fact: 40 is the only number spelled in alphabetical order.



★ Focus Mode: Shaina

MULTIPLICATION TABLES (20-25)

Table of 20

20×1	20
20×2	40
20×3	60
20×4	80
20×5	100
20×6	120
20×7	140
20×8	160
20×9	180
20×10	200

Table of 21

21×1	21
21×2	42
21×3	63
21×4	84
21×5	105
21×6	126
21×7	147
21×8	168
21×9	189
21×10	210

Table of 22

22×1	22
22×2	44
22×3	66
22×4	88
22×5	110
22×6	132
22×7	154
22×8	176
22×9	198
22×10	220

Table of 23

23×1	23
23×2	46
23×3	69
23×4	92
23×5	115
23×6	138
23×7	161
23×8	184
23×9	207
23×10	230

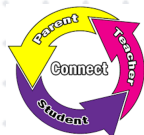
Table of 24

24×1	24
24×2	48
24×3	72
24×4	96
24×5	120
24×6	144
24×7	168
24×8	192
24×9	216
24×10	240

Table of 25

25×1	25
25×2	50
25×3	75
25×4	100
25×5	125
25×6	150
25×7	175
25×8	200
25×9	225
25×10	250

→ Turn page for Mission Mode!



Mission: Mathematics

HEAD CHEF ID

#7175



Chef Shaina, you are baking. You have 20 trays, each with 4 eggs.

? Task: Total eggs used?

Visualizer: 7×4



7 rows
4 cols

Total: 28

Speed Track

$$25 \times 5 =$$

$$22 \times 8 =$$

$$20 \times 20 =$$

The Missing Link (Table of 21)

Find the missing number in the sequence:

$$42 \rightarrow 63 \rightarrow \boxed{?} \rightarrow 105$$

BRAIN GYM

Tip: To multiply by 10, just add a '0' to the end!

Fact: The symbol for division (\div) is called an obelus.



★ Focus Mode: Shaina

MULTIPLICATION TABLES (26-30)

Table of 26

26×1	26
26×2	52
26×3	78
26×4	104
26×5	130
26×6	156
26×7	182
26×8	208
26×9	234
26×10	260

Table of 27

27×1	27
27×2	54
27×3	81
27×4	108
27×5	135
27×6	162
27×7	189
27×8	216
27×9	243
27×10	270

Table of 28

28×1	28
28×2	56
28×3	84
28×4	112
28×5	140
28×6	168
28×7	196
28×8	224
28×9	252
28×10	280

Table of 29

29×1	29
29×2	58
29×3	87
29×4	116
29×5	145
29×6	174
29×7	203
29×8	232
29×9	261
29×10	290

Table of 30

30×1	30
30×2	60
30×3	90
30×4	120
30×5	150
30×6	180
30×7	210
30×8	240
30×9	270
30×10	300

→ Turn page for Mission Mode!



Mission: Mathematics

PILOT ID

#2180



Captain Shaina, you fly 26 trips. Each trip is 9 hours.

? Task: Total flying hours?

Visualizer: 7×4



7 rows
4 cols

Total: 28

Speed Track

$$30 \times 5 =$$

$$28 \times 8 =$$

$$26 \times 26 =$$

The Missing Link (Table of 27)

Find the missing number in the sequence:

54 → 81 → ? → 135

BRAIN GYM

Tip: Multiplication is just repeated addition ($5 \times 3 = 5 + 5 + 5$).

Fact: A 'jiffy' is an actual unit of time (1/100th sec).



Mastering Quarters & Halves

Time to slice it up, Shaina!

TABLE OF $\frac{1}{4}$ (0.25)	
$\frac{1}{4} \times 1$	0.25
$\frac{1}{4} \times 2$	0.5
$\frac{1}{4} \times 3$	0.75
$\frac{1}{4} \times 4$	1
$\frac{1}{4} \times 5$	1.25
$\frac{1}{4} \times 6$	1.5
$\frac{1}{4} \times 7$	1.75
$\frac{1}{4} \times 8$	2
$\frac{1}{4} \times 9$	2.25
$\frac{1}{4} \times 10$	2.5

TABLE OF $\frac{1}{2}$ (0.50)	
$\frac{1}{2} \times 1$	0.5
$\frac{1}{2} \times 2$	1
$\frac{1}{2} \times 3$	1.5
$\frac{1}{2} \times 4$	2
$\frac{1}{2} \times 5$	2.5
$\frac{1}{2} \times 6$	3
$\frac{1}{2} \times 7$	3.5
$\frac{1}{2} \times 8$	4
$\frac{1}{2} \times 9$	4.5
$\frac{1}{2} \times 10$	5

Visual Proof: The Pizza Party

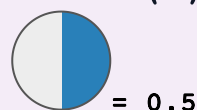
The Quarter ($\frac{1}{4}$)



See the purple slice? That is 15 minutes on a clock or one slice of pizza.

4 Slices = 1 Whole!

The Half ($\frac{1}{2}$)



See the blue shape? It's a Semi-circle.

If you fold a paper in the middle, you get **Two** Halves.



The "Pauna" & "Sava" Tables

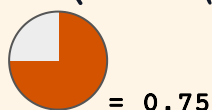
Shaina, check the circles below!

TABLE OF $\frac{3}{4}$ (0.75)	
$\frac{3}{4} \times 1$	0.75
$\frac{3}{4} \times 2$	1.5
$\frac{3}{4} \times 3$	2.25
$\frac{3}{4} \times 4$	3
$\frac{3}{4} \times 5$	3.75
$\frac{3}{4} \times 6$	4.5
$\frac{3}{4} \times 7$	5.25
$\frac{3}{4} \times 8$	6
$\frac{3}{4} \times 9$	6.75
$\frac{3}{4} \times 10$	7.5

TABLE OF $1\frac{1}{4}$ (1.25)	
$1\frac{1}{4} \times 1$	1.25
$1\frac{1}{4} \times 2$	2.5
$1\frac{1}{4} \times 3$	3.75
$1\frac{1}{4} \times 4$	5
$1\frac{1}{4} \times 5$	6.25
$1\frac{1}{4} \times 6$	7.5
$1\frac{1}{4} \times 7$	8.75
$1\frac{1}{4} \times 8$	10
$1\frac{1}{4} \times 9$	11.25
$1\frac{1}{4} \times 10$	12.5

35 Visual Proof: Lucky Numbers

Three Quarters ($\frac{3}{4}$)



Almost full! Only one slice is missing. This is called "Pauna" in Hindi.

One & Quarter ($1\frac{1}{4}$)



Look! **1 Full Circle** plus **1 Slice**. This is "Sava" - the lucky amount!



Chef Shaina's Measurement:

If a recipe needs **$1\frac{1}{4}$ Cups**, you fill 1 Full Cup and then $\frac{1}{4}$ more!



The "Dedh" & "Dhai" Masters

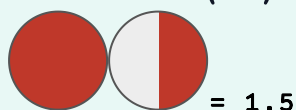
Counting full circles and halves!

TABLE OF 1½ (1.5)	
1.5 × 1	1.5
1.5 × 2	3
1.5 × 3	4.5
1.5 × 4	6
1.5 × 5	7.5
1.5 × 6	9
1.5 × 7	10.5
1.5 × 8	12
1.5 × 9	13.5
1.5 × 10	15

TABLE OF 2½ (2.5)	
2.5 × 1	2.5
2.5 × 2	5
2.5 × 3	7.5
2.5 × 4	10
2.5 × 5	12.5
2.5 × 6	15
2.5 × 7	17.5
2.5 × 8	20
2.5 × 9	22.5
2.5 × 10	25

Visual Proof: The Market

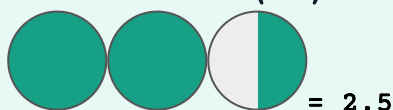
One & Half (1.5)



= 1.5

1 Full + 1 Half. This is "Dedh". Like eating 1 full Roti and sharing the next one!

Two & Half (2.5)



= 2.5

2 Full + 1 Half. This is "Dhai". Like buying 2 Kg of Potatoes and adding 500g more.

Shaina's Logic Check:

Look at the Green Circles above (2.5).

If you double them (multiply by 2), the two "Halves" will become a "Whole".

Result = **5 Full Circles!**



Even Numbers: The Best Friends

Welcome to the Friendship Club, Shaina!

The "Best Friend" Rule

Hey **Shaina**! Even numbers are friendly. They **ALWAYS** have a partner. No one is left alone!

Rule: Any number ending in **0, 2, 4, 6, 8** is Even.

Number 4 (Even)



Look! 2 pairs of shoes.
Everyone has a match.

Number 6 (Even)



Look! 3 pairs of Cherries.
Perfect partners!

The Temple Shoe Rack

When you go to a Temple or Gurudwara, you take off your shoes.

Shoes always come in **pairs (2)**.

If you count all the shoes outside, the total number will **ALWAYS** be **Even**!

Try it, Shaina! Count the slippers at your home door.

Shaina's Challenge:

Circle the Even numbers: **5, 8, 11, 22, 37, 40**



Odd Numbers: The Leaders

Who is standing alone? It's the Leader!

The "Odd One Out" Rule

Shaina, Odd numbers are special. They always have pairs, but **ONE** is always left alone. That one is the Captain or Leader!

Rule: Any number ending in **1, 3, 5, 7, 9** is Odd.

Number 5 (Odd)



2 Pairs + **1 Leftover!**
That single shoe is the "Odd One".

Number 7 (Odd)



3 Pairs + **1 Leftover!**
The extra cherry has no partner.

The Auto-Rickshaw Logic

Look at an Auto-Rickshaw. It has **3 Wheels**.

Two wheels at the back (A Pair).

One wheel at the front (The Leader).

3 is an Odd Number!



The Name Game:

Count the letters in your name: "**Shaina**".

Number of letters: **6**

Is it Odd or Even? _____



The Magic of Prime Numbers

Welcome to the Prime Lab, Scientist Shaina!

PRIME

The "Unbreakable" Numbers

The Laddoo Theory



Imagine, **Shaina**, you have a box of **13 Laddoos**. You want to share them equally.

- ✗ Share with 2 friends? (1 left over)
- ✗ Share with 3 friends? (1 left over)

13 is Prime. It refuses to be broken! It can only be eaten by **YOU alone** (1 person) or shared if you invite **13 people** (1 each).

The Kabaddi Team



P.T. Teacher wants to make equal teams.

✓ **12 Students:**
2 teams of 6, or 3 teams of 4.
(12 is Composite - Flexible!)

✗ **11 Students:**
Cannot make equal teams!
(11 is Prime - Stubborn!)

Definition

A Prime Number has exactly **TWO** factors:
1 and Itself.






The Prime Hunter's Map

Mission: Find all the orange boxes. There are **25 Primes** between 1 and 100.

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

Map Legend

-  Prime Numbers (Only 2 factors)
-  Composite Numbers (Many factors)
-  Number 1 (Unique - Neither!)

The Special Number '2'

Look at the number 2 on the map.
It is the **ONLY Even Prime Number**.
All other even numbers (4, 6, 8...) can be divided by 2, so they are not Prime!



Prime Time Activities

The Rangoli Challenge



Instructions: Ask **Sohel Rana** to help you draw dots on the floor or paper.
"Prime numbers hate Rectangles!"

Number 8 (Composite)



Makes a Rectangle!

Number 7 (Prime)



Only a straight line!

Your Turn: Try arranging **11 coins**. Can you make a rectangle?

Yes / No

Agent Shaina's Secret Code



The safe is locked! Use the **Prime Map** on the previous page to find the code numbers.

1. The smallest Prime Number: [__]

2. The largest Prime Number before 10: [__]

3. A "Twin Prime" pair (e.g., 3 & 5): [11] & [__]

CODE: Sum of all answers = _____

"Math is the key to the universe!"



The Friendly Numbers

Meet the "Composite" Numbers, Shaina!

COMPOSITE

The "Flexible" Numbers

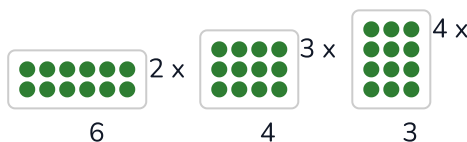
The Barfi Box

Shaina, Composite numbers are friendly! They love to share.

Take the number **12**. You can share 12 Barfis in many ways:

- ✓ 2 friends get 6 each.
- ✓ 3 friends get 4 each.
- ✓ 4 friends get 3 each.

Visual Proof: Number 12



Definition

A Composite Number has **MORE THAN 2** factors.






The Composite Army

Mission: Look at all the Green boxes. These numbers can be divided easily!

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

MAP LEGEND

-  Composite (Friendly)
-  Prime (Lonely)
- 

Smallest Captain

Look at Number **4**.

It is the **Smallest Composite Number**.

(1 is neither, 2 & 3 are Prime... but 4 is 2×2 !)



Composite Factory

The Chocolate Factory

Manager Shaina, you have a Big Chocolate Bar with **18 Pieces**. How can you break it into equal rows?

 2 Rows of 9

 3 Rows of 6

The Marching Band

Ask **Sohel Rana** to give you a number between 10 and 30. Check if it can form a "Rectangle Band".

1. Number chosen by Sohел Rana: _____

2. Can you make 2 equal rows? _____

Yes / No

Conclusion: It is a _____ Number!



The Clock Family

Meet the Two Brothers, Shaina!



The Short & Long Brother

Look at the clock face. It has numbers from 1 to 12. These are "Rooms".

1. **The Short Brother (Hour Hand):** He is slow and lazy. He points to the **Hour**.
2. **The Long Brother (Minute Hand):** He is fast and skinny! He counts the **Minutes**.



3:00

O'Clock Rule:

When Long Brother is at 12, it is exactly that hour.



4:30

Half-Past Rule:

When Long Brother is at 6, it is "Half Past".



The Secret Code

The Long Brother speaks in the **Table of 5!**

At 1 = 5 mins, At 2 = 10 mins, At 3 = 15 mins...

Calculation: Number \times 5 = Minutes.



Digital Time & Trains

Digital clocks don't have hands. They show numbers directly!



AM

Morning Time
(Starts at Midnight, ends at Noon)

07:30 AM

School Bus



PM

Evening Time
(Starts at Noon, ends at Midnight)

08:00 PM

Dinner Time



Indian Railway Time



Trains don't use AM or PM. They count up to 24!
When it is **1 PM**, the train clock says **13:00**.

The Magic Trick (+12)

4:00 PM $\rightarrow 4 + 12 \rightarrow$ 16:00

Challenge: If the train leaves at **15:00**, what time is it in PM?
_____ (Hint: 15 - 12)



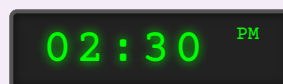
Time Master Activities

1. Match the Time

Draw a line to match the Analog Clock to the Digital Time.



A



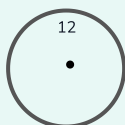
B



2. Shaina's Day

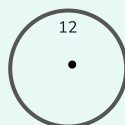


Fill in the clocks for your daily routine!



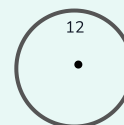
Wake Up

Draw Hands



Play Time

Draw Hands



Sleep

Draw Hands

"Time flies when you are having fun!"



The Data Detective

Counting made easy, Detective Shaina!

The Traffic Survey



Imagine you are standing on the balcony. You want to count the vehicles passing by. Instead of writing "1, 2, 3...", we use **Tally Marks**!

The Rule: Draw 4 straight lines, then 1 diagonal line to "bundle" them into a **Group of 5**.

 Auto



7

 Scooter



12

 Bus



4

5-Finger Trick

Just like your hand has 5 fingers, a Tally Bundle has 5 lines!
It makes counting super fast.



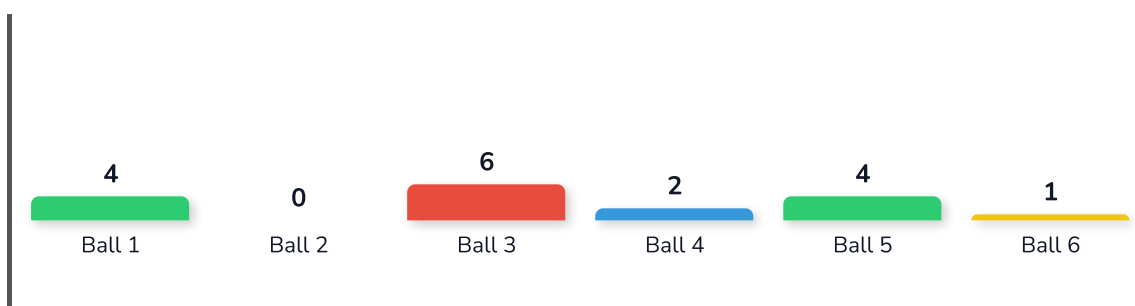
The Cricket Graph

Detective **Shaina** converts Tally Marks into pictures called **Bar Graphs**.



Runs Scored in Over 1

Bowler: Bumrah



Highest Score

6 Runs (Ball 3)

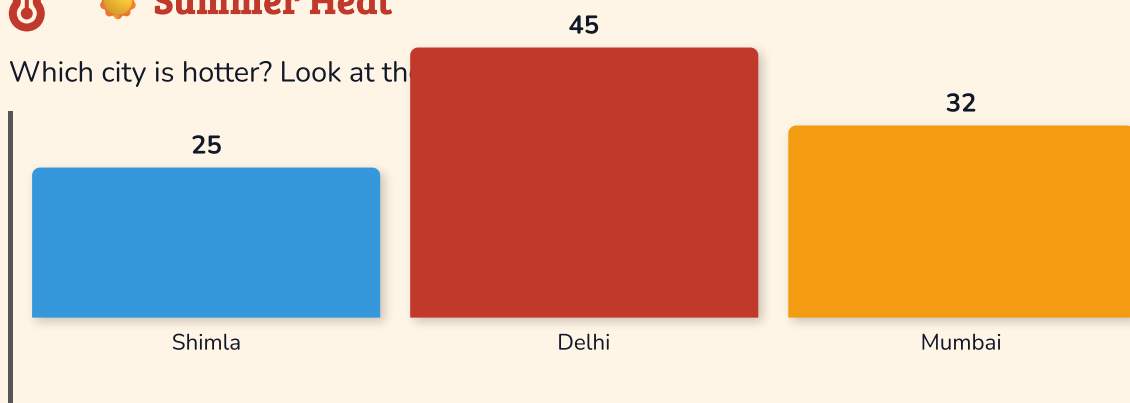
Lowest Score

0 Runs (Ball 2)

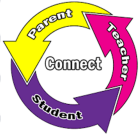


Summer Heat

Which city is hotter? Look at the



Shaina's Analysis: Delhi is the hottest city!



Family Survey Mission

1. Favorite Mithai Survey



Ask **Sohel Rana**, grandparents, and cousins what their favorite sweet is. Draw Tally Marks below!

Sweet Name	Tally Marks (Draw Here)	Total
Gulab Jamun		
Jalebi		
Kaju Katli		
Laddoo		

2. The Smiley Key



KEY: 😊 = 2 Students

Class 1: 😊 😊 😊

Class 2: 😊 😊

Class 3: 😊 😊 😊 😊

(Hint: Count the smileys and multiply by 2!)

"Data helps us make smart decisions!"



Wealth Manager Shaina

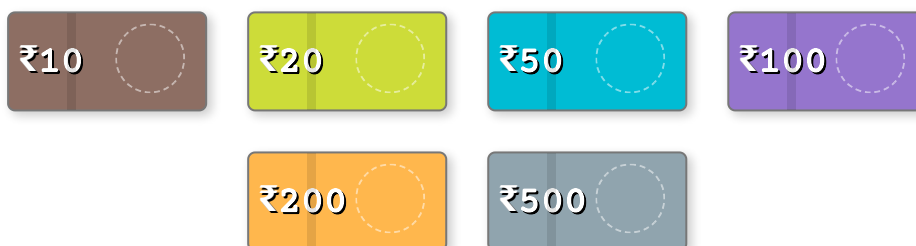
Learning the value of Money!

IN Indian Rupee (₹)



Hello **Manager Shaina**! In India, we use Rupees. To be smart with money, you must know how to count notes and give "Change" (Chutta).

The Gandhi Series Notes



The Magic of Change

One ₹100 Note



=

Two ₹50 Notes



"Save money, and money will save you!"



Smart Shopper Shaina

You have limited pocket money. Make smart choices!



Your Wallet

Birthday Gift from Grandma

₹500

(One Grey Note)



Cricket Bat

₹350



Season Ball

₹200



The Big Decision

Cost of Bat: ₹350

Cost of Ball: + ₹200

Total Cost: ₹550

Can Shaina buy both?

NO!

(You need ₹50 more!)



Market Day Challenge



The Vegetable Bill



You went to the market with **Sohel Rana**. Help check if the shopkeeper calculated the bill correctly!

RAMU KAKA'S VEGETABLES

Fresh Farm Produce

Item	Price
 1kg Potato	₹ 30
 1kg Onion	₹ 40
 1kg Tomato	₹ 50
 Coriander (Free)	₹ 0
TOTAL	<input type="text"/>

Thank You! Visit Again.

Task: Add $30 + 40 + 50$

"A penny saved is a penny earned!"



The Calendar Captain

Captain Shaina, memorize this map to master the year!



THE 7 DAYS OF THE WEEK

SUN
Fun Day

MON

TUE

WED

THU

FRI

SAT
Rest Day



The 12 Months of the Year

No.	Month Name	Days	Indian Season
1	January	31	❄ Winter
2	February	28 or 29	🌸 Spring
3	March	31	☀ Summer
4	April	30	☀ Summer
5	May	31	🔥 Hot
6	June	30	☁ Monsoon
7	July	31	☁ Monsoon
8	August	31	☁ Monsoon
9	September	30	🍁 Autumn
10	October	31	🍁 Autumn
11	November	30	❄ Winter
12	December	31	❄ Cold



Smart Tip: July & August are "Twin Peaks"! They both have 31 Days.



Shaina's Calendar Fun

The Time Travel Game

Fill in the missing days. Don't let the Time Machine break!

Yesterday	TODAY	Tomorrow
Monday	TUESDAY	_____
_____	FRIDAY	Saturday
Saturday	SUNDAY	_____

All About Shaina

1. My Birthday Month:

2. My Favorite Day:

3. Which month has your Summer Vacation?

Word Scramble

Fix the spelling of these months:

1. M R A H C → MARCH

2. J L U Y → _____

3. A P L R I → _____

4. S U N D A Y → _____



The Leap Year & Tricks



The February Mystery

February is the shortest month!

Usually, it has **28 Days**.

But every 4 years, it gets a bonus day: **29 Days**.

This special year is called a **LEAP YEAR** (Total 366 Days).



THE MOUNTAIN TRICK

Climb the mountains with Shaina!

Peak (High) = 31 Days | **Valley (Low) = 30 Days**



Notice: July & August are "Twin Peaks"! Both are High (31).



The Calendar Song

"Thirty days hath September,
April, June, and November.
All the rest have thirty-one,
Except for February alone,
Which has twenty-eight days clear,
And twenty-nine in each Leap Year!"

Challenge for Sohail Rana:

Ask Shaina: "If today is Saturday, what day will it be in 2 days?"

Answer: _____



THE TIME LORD'S SCROLL

Welcome, Time Lord Shaina! Master this table to control the clock.



WHAT IS A YEAR?

A "Year" is the time Earth takes to go around the Sun!
It is equal to **12 Months**, OR **52 Weeks**, OR **365 Days**.

Small Unit	=	Big Unit
60 Seconds	=	1 Minute
60 Minutes	=	1 Hour
24 Hours	=	1 Day
7 Days	=	1 Week
🌍 THE EARTH ORBIT (1 YEAR)		
12 Months	=	1 Year
52 Weeks	=	1 Year
365 Days	=	1 Year
🚀 HISTORY JUMPS		
10 Years	=	1 Decade
100 Years	=	1 Century
1000 Years	=	1 Millennium



PRO TIP: Your birthday comes once every **365 Days** (1 Year)!



The Time Machine

Mission 1: Noodles

It takes **2 minutes** to boil noodles.
How many seconds is that?

$$2 \times 60 = \underline{\quad\quad} \text{ Sec}$$

Mission 2: Movie

A movie is **120 minutes** long. How
many hours is that?

$$120 \div 60 = \underline{\quad\quad} \text{ Hrs}$$



READ THE CLOCKS



3:00



9:30



6:15



The 24-Hour Challenge

If **Sohel Rana** goes to sleep at **10:00 PM**, what does the Army Clock say?

$$10 + 12 = 22:00$$



Calendar Conqueror



The "Leap" Year

A normal year has **365 Days**.

But every 4 years, we add 1 extra day (Feb 29). This is a **Leap Year (366 Days)**!

🔍 Time Match

Match the years to their special names!

10 Years

Decade

100 Years

Century

1000 Years

Millennium



SHAINA'S FUTURE TIMELINE

1. I was born in the year: _____
2. I will turn 50 years old in: _____
3. That is 5 Decades from now!



The Temperature Tale

Is it Hot or Cold, Shaina?



Measuring "Hotness"



Temperature tells us how Hot or Cold something is.
We measure it in **Degrees Celsius ($^{\circ}\text{C}$)**.



Going Up: Gets Hotter (Fire, Sun).



Going Down: Gets Colder (Ice, Fridge).



Cold

Ice Cream

0°C

<



Hot

Tea

80°C



Freezing Point

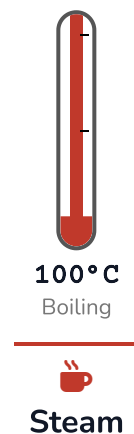
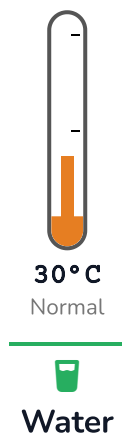
Water turns into Ice at **0°C** .

(This is when you need a thick jacket!)



The Magic Thermometer

Watch how water changes as the red line goes up!



☀ Summer Day

In May, India gets very hot!
Temp: **40°C to 45°C**.
(Don't go out without a cap!)

🧘 Body Temp

A healthy human body is around **37°C**.
(If it's higher, you might have a fever.)



Weather Reporter

1. Shimla vs. Rajasthan



Look at the temperatures below. Who needs a **Woolen Sweater**?

Shimla
5°C

Jaipur
42°C

Answer: The person in _____ needs a sweater.

2. Dr. Shaina's Clinic



You checked **Sohel Rana's** temperature. The thermometer shows **36°C**.
(Remember: Normal is 37°C)

Does Sohel Rana have a fever?

NO

YES

"Stay cool in summer, warm in winter!"



The Geometry Garden

Welcome Gardener Shaina!

Shapes Around Us



Look around, **Shaina**! Everything has a shape.

Your book is a **Rectangle**. The Sun is a **Circle**. Even the Diwali Rangoli is made of many shapes!



Square

4 Equal Sides



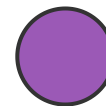
Rectangle

Opposite Sides Equal



Triangle

3 Corners



Circle

No Corners!



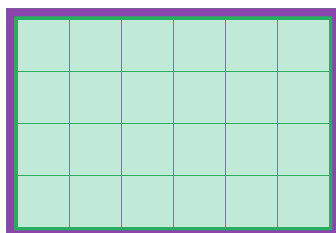
Spy Mission:

Find 3 Circles in your house. (Hint: Clock, Plate, Coin)



Farmer Shaina's Field

You have a beautiful farm. You need to fence it and plant grass.



Vegetable Patch (4m x 6m)

Fence (Border): 20m

Grass (Inside): 24 sq.m

Perimeter (The Fence)

The Boundary Line.

Imagine walking around the edge of the farm.

Formula: $2 \times (\text{Length} + \text{Breadth})$

Example: $2 \times (6 + 4) = 20\text{m}$

Area (The Grass)

The Inside Space.

Count the number of 1m squares inside.

Formula: $\text{Length} \times \text{Breadth}$

Example: $6 \times 4 = 24 \text{ squares}$

Pro Tip: Paint covers Area. Frame covers Perimeter.



Construction Site

1. Fencing the Farm



Farmer Sohel Rana wants to put a wire fence around a square field. Each side is **10 meters** long.



$$\text{Side} = 10\text{m}$$

$$\text{Perimeter} = 4 \times 10 = \underline{\underline{40 \text{ meters}}}$$

2. Tiling the Room



Your room is **5 meters long** and **3 meters wide**. How many 1m tiles do you need to cover the floor?



$$\text{Area} = \text{Length} \times \text{Breadth}$$

$$5 \times 3 = \underline{\underline{15 \text{ Tiles}}}$$

"Math builds the world around us!"



Fraction Feasts

Welcome to the Kitchen, Chef Shaina!



The Hot Paratha Story



Sohel Rana made 1 big, hot Paratha.

1. **Whole (Pura):** The full Paratha. (1)
2. **Half (Adha):** Cut in the middle for two people. ($1/2$)
3. **Quarter (Pav):** Cut into 4 pieces for cousins. ($1/4$)



$1/1$

Whole



$1/2$

Half



$1/4$

Quarter



Chef's Dictionary

- **Numerator (Top):** Slices you EAT.
- **Denominator (Bottom):** Total slices made.



The Fraction Wall

Observe: When the bottom number gets **bigger**, the slice gets **smaller**!



Big Surprise!

1/4 is SMALLER than 1/2.

Sharing a chocolate with 4 people means you get a smaller piece than sharing with just 2!

Magic Match

Look at the wall:

Two **1/4** blocks equal one **1/2** block.

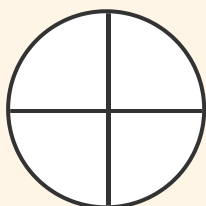


Chef Shaina's Orders

1. The Pizza Order



A customer wants $\frac{3}{4}$ of the Pizza with **Spicy Sauce**.
(Please color 3 slices Red!)



Order Ticket:

Target: $\frac{3}{4}$

Color 3 parts

2. Sharing Laddoos



There are **8 Laddoos**. Give $\frac{1}{2}$ (**Half**) to your sister.



Half of 8 is: _____

"Sharing is caring... and Math!"



Shaina's Math Dictionary

Master the language of Math, Professor Shaina!

Prime Numbers

Numbers divisible only by 1 and themselves (e.g., 2, 3, 5, 7, 11).

(Draw example here)

Even Numbers

End in 0, 2, 4, 6, 8. Divisible by 2.

(Draw example here)

Odd Numbers

End in 1, 3, 5, 7, 9. Not divisible by 2.

(Draw example here)

Memory Challenge

Cover the definitions above. Can you explain "Prime Numbers" to Soheli Rana?

☐ Yes, I did it!



Psst... Shaina, these are your Secret Power-Ups!

Class 1-2 Cheat Codes

Addition



$$a + b = c \text{ (Part + Part = Whole)}$$

Use this for homework!

Subtraction



$$a - b = c \text{ (Whole - Part = Part)}$$

Use this for homework!

Skip Counting



2, 4, 6, 8... (Count by 2s)

Use this for homework!

Place Value



$$42 = 4 \text{ Tens} + 2 \text{ Ones}$$

Use this for homework!

Comparison



Greater (>), Less (<),
Equal (=)

Use this for homework!



Ramanujan's Sketchpad

Use this space to solve a tough problem or write a new formula you learned!

"An equation means nothing to me unless it expresses a thought of God." - Srinivasa Ramanujan



Psst... Shaina, these are your Secret Power-Ups!

Class 3-5 Cheat Codes

Division



$$\text{Dividend} \div \text{Divisor} = \text{Quotient}$$

Use this for homework!

Perimeter (Rectangle)



$$2 \times (\text{Length} + \text{Breadth})$$

Use this for homework!

Perimeter (Square)



$$4 \times \text{Side}$$

Use this for homework!

Area (Rectangle)



$$\text{Length} \times \text{Breadth}$$

Use this for homework!

Fractions



$$\text{Numerator} / \text{Denominator}$$

Use this for homework!

Time



$$\begin{aligned} 1 \text{ Hour} &= 60 \text{ Mins}, 1 \text{ Min} \\ &= 60 \text{ Secs} \end{aligned}$$

Use this for homework!

Money



$$1 \text{ Rupee} = 100 \text{ Paise}$$

Use this for homework!



Ramanujan's Sketchpad

Use this space to solve a tough problem or write a new formula you learned!



Psst... Shaina, these are your Secret Power-Ups!

Class 6-8 Cheat Codes

Integers Rule (+)



$$\begin{aligned} (+) + (+) &= +, & (-) + \\ & & (-) = - \end{aligned}$$

Use this for homework!

Triangle Sum



$$\text{Sum of angles} = 180^\circ$$

Use this for homework!

Pythagoras



$$a^2 + b^2 = c^2$$

Use this for homework!

Circle Area



$$\pi r^2$$

Use this for homework!

Simple Interest



$$(P \times R \times T) / 100$$

Use this for homework!

Algebra Identity 1



$$(a+b)^2 = a^2 + 2ab + b^2$$

Use this for homework!



Ramanujan's Sketchpad

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Psst... Shaina, these are your Secret Power-Ups!

Class 9-10 Cheat Codes

Quadratic Formula



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Use this for homework!

Distance Formula



$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Use this for homework!

Trigonometry



$$\sin\theta = \frac{\text{Opp}}{\text{Hyp}}, \cos\theta = \frac{\text{Adj}}{\text{Hyp}}$$

Use this for homework!

Vol. Cylinder



$$\pi r^2 h$$

Use this for homework!

Probability



$$P(E) = \frac{\text{Favorable}}{\text{Total outcomes}}$$

Use this for homework!



Ramanujan's Sketchpad

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The Math Secret Code

Agent Shaina, you must learn these signs to speak "Math"!

Math doesn't use words like "Please add this."
It uses **Symbols**! It is a secret code that makes solving problems fast.



Plus

Means: Add, Join, More

$$2 + 3 = 5$$



Minus

Means: Subtract, Take Away

$$5 - 2 = 3$$



Multiply

Means: Groups of, Times

$$3 \times 4 = 12$$



Divide

Means: Share Equally

$$10 \div 2 = 5$$



EQUALS (The answer is...)



The Hungry Alligator

Shaina, meet the Math Alligator!
He is always hungry, so he always opens his mouth to eat the **BIGGER** number.



Greater Than

$$8 > 2$$

(8 is bigger than 2)



Less Than

$$3 < 9$$

(3 is smaller than 9)



Mission Status: Level 1 Complete!

Wow, **Shaina!** You have explored the Tables, Time, Money, and Symbols. You are now a **Certified Math Explorer**.



Go for Math Genie
LEVEL 2

For next level exploration!



Use Worksheet
LEVEL 1

For adventure practice!

♥ A Note for Sohail Rana:

"Thank you for being the co-pilot in this journey. Please ensure Shaina practices these concepts in the **Workbook** to build a rock-solid foundation. See you in Level 2!"



CERTIFICATE OF MASTERY

LEVEL-1 FOUNDATION MATHEMATICS

This honor is proudly presented to

Shaina Rana

For successfully conquering numbers, mastering logic, and
completing the "User-Name Specific Learning" journey
with courage and curiosity.



SKILLS UNLOCKED

- ✓ Tables 1-30 Mastery
- ✓ Prime & Composite Logic
- ✓ Time & Money Management
- ✓ Real-Life Problem Solving

The Math Guardian's Pledge (For Sohail Rana):

"I promise to keep math fun! I will celebrate mistakes as learning spots. I will NOT say 'I was bad at math'. Instead, I will say 'Let's learn this together'. I will encourage Shaina to see math in cooking, shopping, and play."



DATE OF COMPLETION

DR. SOHEL RANA, PhD
Founder, Psy-Fi-Skills Eduverse

Sohail Rana
(Math Supporter)