



# 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



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## Dr. Sohel Rana

Founder

[www.thelifenavigator.com](http://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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## 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.

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

$$3 + 4 = 7$$

### Garden Party /1

You see 5 Sunflowers.  
You plant 5 Roses.

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

$$5 + 5 = 10$$

### 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.

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

$$6 + 3 = 9$$

### 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	
$6 + 1$	<b>7</b>
$6 + 2$	<b>8</b>
$6 + 3$	<b>9</b>
$6 + 4$	<b>10</b>
$6 + 5$	<b>11</b>
$6 + 6$	<b>12</b>
$6 + 7$	<b>13</b>
$6 + 8$	<b>14</b>
$6 + 9$	<b>15</b>
$6 + 10$	<b>16</b>

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

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

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

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



## 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.



CHANGE:  $10 - 4 = ₹6$



Customer: Best Friend

Order: 2

Gave you ₹15.  
Bought Ball for ₹5.



CHANGE:  $15 - 5 = ₹10$



Shaina's Stock



You had 12 Eggs.  
Oh no! 2 broke.



LEFT:  $12 - 2 = 10$



Shopkeeper Tip:

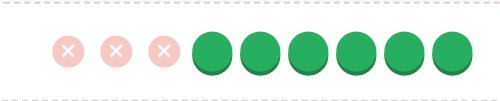
To subtract quickly, count backwards! For 10 - 2, think "10... 9, 8".



Shaina's Wallet



You have ₹9.  
Buy ice-cream for ₹3.



LEFT:  $9 - 3 = ₹6$

💡 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  
**20**

Shot  
**6**

Needed  
**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  $5 \times 2$  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!**

**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.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

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

"Good sharing makes great friends, Shaina!"



★ Focus Mode: Shaina

## MULTIPLICATION TABLES (2-7)

Table of 2

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

Table of 3

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

Table of 4

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

Table of 5

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

Table of 6

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

Table of 7

$7 \times 1$	7
$7 \times 2$	14
$7 \times 3$	21
$7 \times 4$	28
$7 \times 5$	35
$7 \times 6$	42
$7 \times 7$	49
$7 \times 8$	56
$7 \times 9$	63
$7 \times 10$	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: $2 \times 4$

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!  $3 \times 5$  is the same as  $5 \times 3$ .

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



★ Focus Mode: Shaina

## MULTIPLICATION TABLES (8-13)

Table of 8

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

Table of 9

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

Table of 10

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

Table of 11

$11 \times 1$	11
$11 \times 2$	22
$11 \times 3$	33
$11 \times 4$	44
$11 \times 5$	55
$11 \times 6$	66
$11 \times 7$	77
$11 \times 8$	88
$11 \times 9$	99
$11 \times 10$	110

Table of 12

$12 \times 1$	12
$12 \times 2$	24
$12 \times 3$	36
$12 \times 4$	48
$12 \times 5$	60
$12 \times 6$	72
$12 \times 7$	84
$12 \times 8$	96
$12 \times 9$	108
$12 \times 10$	120

Table of 13

$13 \times 1$	13
$13 \times 2$	26
$13 \times 3$	39
$13 \times 4$	52
$13 \times 5$	65
$13 \times 6$	78
$13 \times 7$	91
$13 \times 8$	104
$13 \times 9$	117
$13 \times 10$	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: $8 \times 4$



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:

$18 \rightarrow 27 \rightarrow ? \rightarrow 45$

### 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

$14 \times 1$	<b>14</b>
$14 \times 2$	<b>28</b>
$14 \times 3$	<b>42</b>
$14 \times 4$	<b>56</b>
$14 \times 5$	<b>70</b>
$14 \times 6$	<b>84</b>
$14 \times 7$	<b>98</b>
$14 \times 8$	<b>112</b>
$14 \times 9$	<b>126</b>
$14 \times 10$	<b>140</b>

Table of 15

$15 \times 1$	<b>15</b>
$15 \times 2$	<b>30</b>
$15 \times 3$	<b>45</b>
$15 \times 4$	<b>60</b>
$15 \times 5$	<b>75</b>
$15 \times 6$	<b>90</b>
$15 \times 7$	<b>105</b>
$15 \times 8$	<b>120</b>
$15 \times 9$	<b>135</b>
$15 \times 10$	<b>150</b>

Table of 16

$16 \times 1$	<b>16</b>
$16 \times 2$	<b>32</b>
$16 \times 3$	<b>48</b>
$16 \times 4$	<b>64</b>
$16 \times 5$	<b>80</b>
$16 \times 6$	<b>96</b>
$16 \times 7$	<b>112</b>
$16 \times 8$	<b>128</b>
$16 \times 9$	<b>144</b>
$16 \times 10$	<b>160</b>

Table of 17

$17 \times 1$	<b>17</b>
$17 \times 2$	<b>34</b>
$17 \times 3$	<b>51</b>
$17 \times 4$	<b>68</b>
$17 \times 5$	<b>85</b>
$17 \times 6$	<b>102</b>
$17 \times 7$	<b>119</b>
$17 \times 8$	<b>136</b>
$17 \times 9$	<b>153</b>
$17 \times 10$	<b>170</b>

Table of 18

$18 \times 1$	<b>18</b>
$18 \times 2$	<b>36</b>
$18 \times 3$	<b>54</b>
$18 \times 4$	<b>72</b>
$18 \times 5$	<b>90</b>
$18 \times 6$	<b>108</b>
$18 \times 7$	<b>126</b>
$18 \times 8$	<b>144</b>
$18 \times 9$	<b>162</b>
$18 \times 10$	<b>180</b>

Table of 19

$19 \times 1$	<b>19</b>
$19 \times 2$	<b>38</b>
$19 \times 3$	<b>57</b>
$19 \times 4$	<b>76</b>
$19 \times 5$	<b>95</b>
$19 \times 6$	<b>114</b>
$19 \times 7$	<b>133</b>
$19 \times 8$	<b>152</b>
$19 \times 9$	<b>171</b>
$19 \times 10$	<b>190</b>

→ 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: $8 \times 4$



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

$20 \times 1$	<b>20</b>
$20 \times 2$	<b>40</b>
$20 \times 3$	<b>60</b>
$20 \times 4$	<b>80</b>
$20 \times 5$	<b>100</b>
$20 \times 6$	<b>120</b>
$20 \times 7$	<b>140</b>
$20 \times 8$	<b>160</b>
$20 \times 9$	<b>180</b>
$20 \times 10$	<b>200</b>

Table of 21

$21 \times 1$	<b>21</b>
$21 \times 2$	<b>42</b>
$21 \times 3$	<b>63</b>
$21 \times 4$	<b>84</b>
$21 \times 5$	<b>105</b>
$21 \times 6$	<b>126</b>
$21 \times 7$	<b>147</b>
$21 \times 8$	<b>168</b>
$21 \times 9$	<b>189</b>
$21 \times 10$	<b>210</b>

Table of 22

$22 \times 1$	<b>22</b>
$22 \times 2$	<b>44</b>
$22 \times 3$	<b>66</b>
$22 \times 4$	<b>88</b>
$22 \times 5$	<b>110</b>
$22 \times 6$	<b>132</b>
$22 \times 7$	<b>154</b>
$22 \times 8$	<b>176</b>
$22 \times 9$	<b>198</b>
$22 \times 10$	<b>220</b>

Table of 23

$23 \times 1$	<b>23</b>
$23 \times 2$	<b>46</b>
$23 \times 3$	<b>69</b>
$23 \times 4$	<b>92</b>
$23 \times 5$	<b>115</b>
$23 \times 6$	<b>138</b>
$23 \times 7$	<b>161</b>
$23 \times 8$	<b>184</b>
$23 \times 9$	<b>207</b>
$23 \times 10$	<b>230</b>

Table of 24

$24 \times 1$	<b>24</b>
$24 \times 2$	<b>48</b>
$24 \times 3$	<b>72</b>
$24 \times 4$	<b>96</b>
$24 \times 5$	<b>120</b>
$24 \times 6$	<b>144</b>
$24 \times 7$	<b>168</b>
$24 \times 8$	<b>192</b>
$24 \times 9$	<b>216</b>
$24 \times 10$	<b>240</b>

Table of 25

$25 \times 1$	<b>25</b>
$25 \times 2$	<b>50</b>
$25 \times 3$	<b>75</b>
$25 \times 4$	<b>100</b>
$25 \times 5$	<b>125</b>
$25 \times 6$	<b>150</b>
$25 \times 7$	<b>175</b>
$25 \times 8$	<b>200</b>
$25 \times 9$	<b>225</b>
$25 \times 10$	<b>250</b>

→ 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: $7 \times 4$



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:

$42 \rightarrow 63 \rightarrow ? \rightarrow 105$

### BRAIN GYM

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

**Fact:** The symbol for division (÷) is called an obelus.



★ Focus Mode: Shaina

## MULTIPLICATION TABLES (26-30)

Table of 26

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

Table of 27

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

Table of 28

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

Table of 29

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

Table of 30

$30 \times 1$	30
$30 \times 2$	60
$30 \times 3$	90
$30 \times 4$	120
$30 \times 5$	150
$30 \times 6$	180
$30 \times 7$	210
$30 \times 8$	240
$30 \times 9$	270
$30 \times 10$	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: $7 \times 4$



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:

$54 \rightarrow 81 \rightarrow ? \rightarrow 135$

### 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

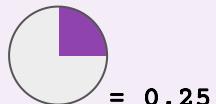
TABLE OF  $\frac{1}{2}$  (0.50)

$\frac{1}{2} \times 1$	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 ( $\frac{1}{4}$ )



$$= 0.25$$

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

4 Slices = 1 Whole!

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



$$= 0.5$$

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)

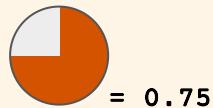
$\frac{3}{4} \times 1$	0.75
$\frac{3}{4} \times 2$	1.5
$\frac{3}{4} \times 3$	2.25
$\frac{3}{4} \times 4$	3
$\frac{3}{4} \times 5$	3.75
$\frac{3}{4} \times 6$	4.5
$\frac{3}{4} \times 7$	5.25
$\frac{3}{4} \times 8$	6
$\frac{3}{4} \times 9$	6.75
$\frac{3}{4} \times 10$	7.5

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  $1\frac{1}{2}$  (1.5)

$1.5 \times 1$	1.5
$1.5 \times 2$	3
$1.5 \times 3$	4.5
$1.5 \times 4$	6
$1.5 \times 5$	7.5
$1.5 \times 6$	9
$1.5 \times 7$	10.5
$1.5 \times 8$	12
$1.5 \times 9$	13.5
$1.5 \times 10$	15

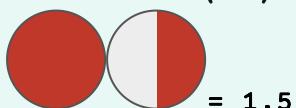
TABLE OF  $2\frac{1}{2}$  (2.5)

$2.5 \times 1$	2.5
$2.5 \times 2$	5
$2.5 \times 3$	7.5
$2.5 \times 4$	10
$2.5 \times 5$	12.5
$2.5 \times 6$	15
$2.5 \times 7$	17.5
$2.5 \times 8$	20
$2.5 \times 9$	22.5
$2.5 \times 10$	25

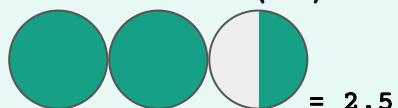


### Visual Proof: The Market

One & Half (1.5)



Two & Half (2.5)



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

**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!



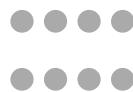
## Prime Time Activities

### 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

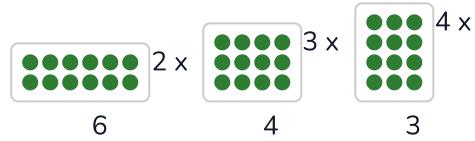
**Shaina**, Composite numbers are friendly! They love to share.

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  $2 \times 2$ !)



## 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 Sohel Rana: \_\_\_\_\_

2. Can you make 2 equal rows? \_\_\_\_\_

Yes / No

Conclusion: It is a \_\_\_\_\_ Number!



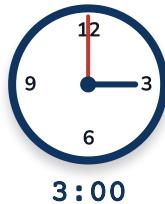
## The Clock Family

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**.



#### O'Clock Rule:

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



#### 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 → 4 + 12 → **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.



02 : 30 PM

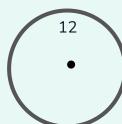


09 : 00 AM

### 2. Shaina's Day

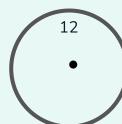


Fill in the clocks for your daily routine!



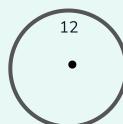
**Wake Up**

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.

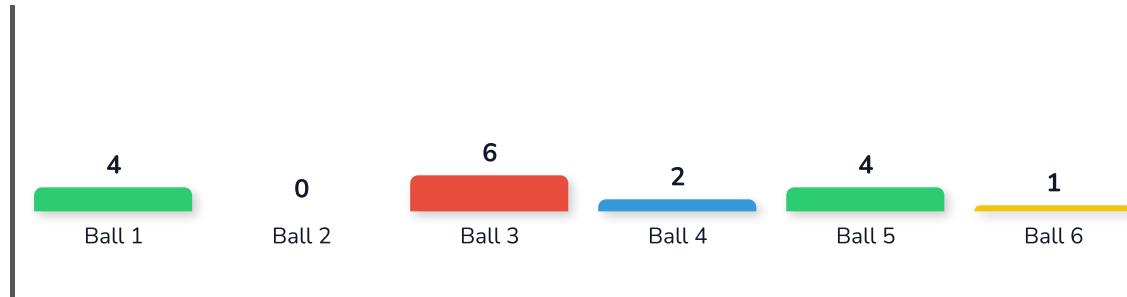


## The Cricket Graph

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

### Runs Scored in Over 1

Bowler: Bumrah



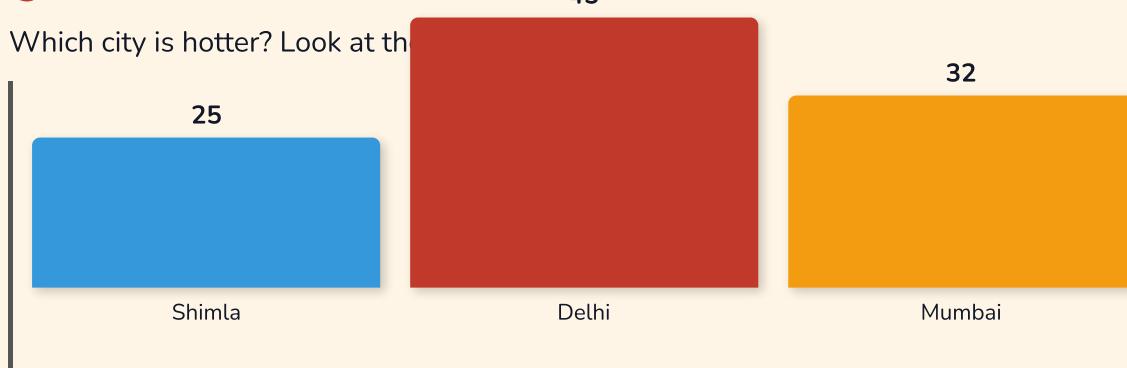
**Highest Score**  
**6 Runs** (Ball 3)

**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

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	霏 Monsoon
7	July	31	霏 Monsoon
8	August	31	霏 Monsoon
9	September	30	🍂 Autumn
10	October	31	🍂 Autumn
11	November	30	❄️ Winter
12	December	31	霏 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 Sohel 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?

$$2 \times 60 = \underline{\hspace{2cm}} \text{ Sec}$$

### Mission 2: Movie

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

$$120 \div 60 = \underline{\hspace{2cm}} \text{ Hrs}$$



### 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 (°C)**.



**Going Up:** Gets Hotter (Fire, Sun).



**Going Down:** Gets Colder (Ice, Fridge).



**Cold**

Ice Cream

**0°C**



**Hot**

Tea

**80°C**



### Freezing Point

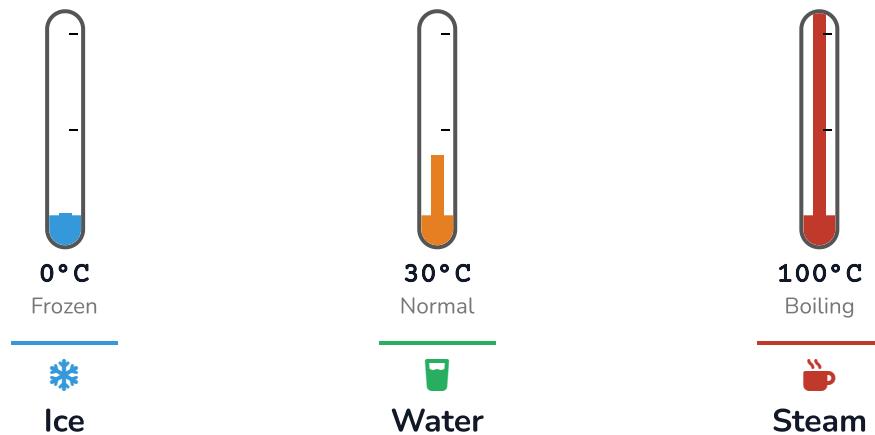
Water turns into Ice at **0°C**.

(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!)

### 体温 (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!



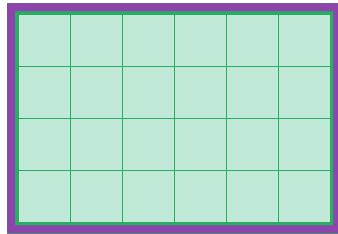
### Spy Mission:

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:** Length  $\times$  Breadth

Example:  $6 \times 4 = 24$  squares

**Pro Tip:** Paint covers Area. Frame covers Perimeter.

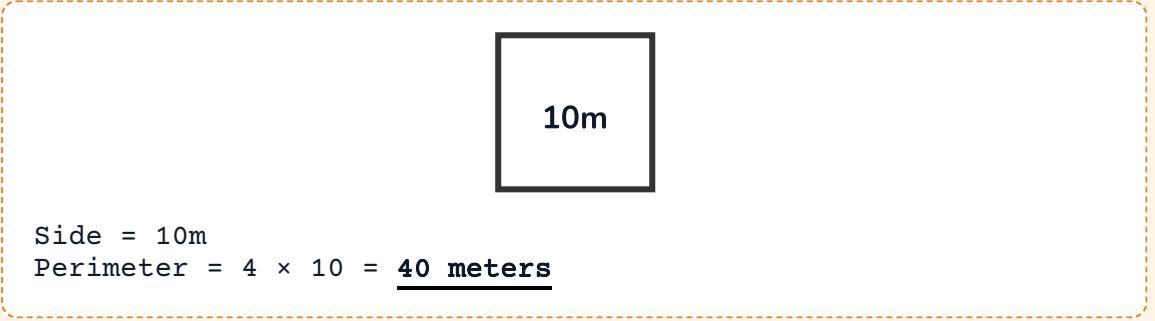


## Construction Site

### 1. Fencing the Farm



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



10m

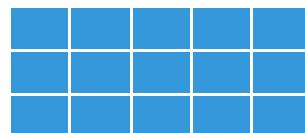
Side = 10m

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

### 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?



Area = Length  $\times$  Breadth

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

"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.

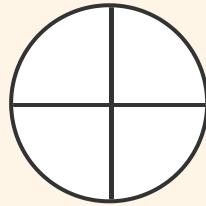


## Chef Shaina's Orders

### 1. The Pizza Order



A customer wants  $3/4$  of the Pizza with Spicy Sauce.  
(Please color 3 slices Red!)



Order Ticket:

Target:  $3/4$

Color 3 parts

### 2. Sharing Laddoos



There are **8 Laddoos**. Give  **$1/2$  (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 **Sohel Rana**?

Yes, I did it!



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

# Class 1-2 Cheat Codes

## Addition

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

*Use this for homework!*

## Subtraction

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

*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



**Dividend ÷ Divisor = 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



**Numerator / Denominator**

*Use this for homework!*

### Time



**1 Hour = 60 Mins, 1 Min = 60 Secs**

*Use this for homework!*

### Money

Rs

**1 Rupee = 100 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 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

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

*Use this for homework!*

## Vol. Cylinder

$$\pi r^2 h$$

*Use this for homework!*

## Probability

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

*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



## 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 Sohel 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
- Prime & Mastery
- Time & Money
- Real-Life
- Composite Logic
- Management
- Problem Solving

#### • The Math Guardian's Pledge (For Sohel 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

Sohel Rana  
(Math Supporter)