

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



**Hira foundation school**  
A Division of Jamia Darul Uloom

# MENTAL MATHS



[www.hirafoundation.com](http://www.hirafoundation.com)

 [www.linkedin.com/in/hira-foundation-school-a8176b108](https://www.linkedin.com/in/hira-foundation-school-a8176b108)

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# What is Mental Math...?

Mental math is often used as a way to calculate and estimate quickly without using external aids.



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## How it helps to a child?

- It creates great concentration level
- Improves listening skills
- Creates a better memory and sharp observation
- Develops logical thinking





# How can we develop Mental Math skills in our child....?

Here are some strategies....

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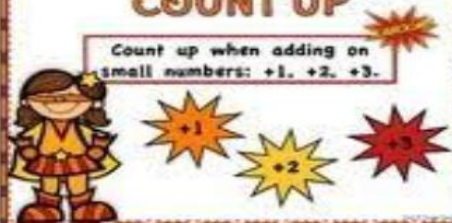
# Strategies For Addition

- Count Up
- Flip Flop
- Doubles
- Doubles + 1

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**COUNT UP**

Count up when adding on small numbers: +1, +2, +3.




A cartoon girl superhero with brown hair, wearing a yellow and orange suit, stands to the left of three colorful stars. The first star is orange and labeled '1', the second is yellow and labeled '2', and the third is red and labeled '3'.

**FLIP FLOP**  
Commutative

Add numbers in any order and the sum is the same.

$$5+4=9$$


so

$$4+5=9$$


A cartoon girl superhero with brown hair, wearing a purple and blue suit, stands to the left of the text.

**DOUBLES**

Add a number to itself and that number doubles.

$$5+5=10$$



A cartoon girl superhero with brown hair, wearing a blue and yellow suit, stands to the left of the text.

**DOUBLES +1**

Add a number to itself and add 1 more.

$$3+3=6$$

so

$$3+4=7$$


A cartoon girl superhero with brown hair, wearing a purple and blue suit, stands to the left of the text.

# Strategies For Subtraction

- Subtracting zero
- Subtracting the same number
- Draw a picture
- Count backwards



## Subtraction Strategies

### Subtracting Zero

The number does not change because you didn't take anything away.

$$5-0=5$$

### Subtracting The Same Number

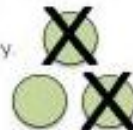
The answer is always zero because you took everything away.

$$5-5=0$$

### Draw a Picture

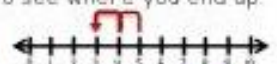
Draw how many you begin with and cross out how many you take away.

$$3-2=1$$



### Count Backwards

Count back on a number line or fingers to see where you end up.



$$5-2=3$$

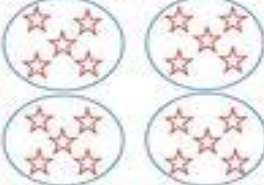
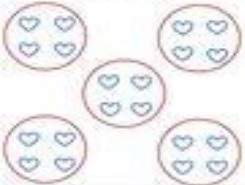


# Strategies For Multiplication

- ✓ Use Repeated Addition
- ✓ Skip Counting
- ✓ Make An Array

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Stuck on a Multiplication Fact?  
Try one of these multiplication strategies.

**4 x 5**

Make 4 groups of 5 	Make 5 groups of 4 
Use Repeated Addition $4 + 4 + 4 + 4 + 4$ $5 + 5 + 5 + 5$	Skip Count $5, 10, 15, 20$ $4, 8, 12, 16, 20$
Make an Array  	

# Some Games Like:

Tic Tac Toe  
Multiples of 3

36		9
30	18	12
6		27

ReliefTeachingIdeas

**UNO FLIP**

Handwritten equations on a notepad:  
 $345 = 9$   
 $145 = 6$   
 $242 = 4$   
 $544 = 6$   
 $44 = 2$

CAN YOU GUESS MY NUMBER?

Handwritten text: "My Number is a Number Between 1 and 30"

**ROLL-IT ROUNDING GAME**  
DIFFERENTIATED

Level 1: Round to the Nearest Tens  
 433, 222, 555, 666, 777, 888, 999, 111, 222, 333, 444, 555, 666, 777, 888, 999

Level 2: Round to the Nearest Hundreds  
 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000

Level 3: Round to the Nearest Thousands  
 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000, 20000, 30000, 40000, 50000, 60000, 70000, 80000, 90000

Multiplication Fast Facts!

START

FINISH

Problems on the path:  
 $2 \times 3$ ,  $3 \times 5$ ,  $4 \times 6$ ,  $5 \times 8$ ,  $6 \times 9$ ,  $7 \times 2$ ,  $8 \times 4$ ,  $9 \times 1$ ,  $10 \times 3$ ,  $11 \times 5$ ,  $12 \times 7$ ,  $13 \times 9$ ,  $14 \times 1$ ,  $15 \times 2$ ,  $16 \times 3$ ,  $17 \times 4$ ,  $18 \times 5$ ,  $19 \times 6$ ,  $20 \times 7$ ,  $21 \times 8$ ,  $22 \times 9$ ,  $23 \times 1$ ,  $24 \times 2$ ,  $25 \times 3$ ,  $26 \times 4$ ,  $27 \times 5$ ,  $28 \times 6$ ,  $29 \times 7$ ,  $30 \times 8$ ,  $31 \times 9$ ,  $32 \times 1$ ,  $33 \times 2$ ,  $34 \times 3$ ,  $35 \times 4$ ,  $36 \times 5$ ,  $37 \times 6$ ,  $38 \times 7$ ,  $39 \times 8$ ,  $40 \times 9$

Multiplication SQUARES

Handwritten numbers in the grid:  
 Row 1: 10, 24, 3, 12, 4, 25, 2, 15  
 Row 2: 30, 36, 8, 15, 5, 18, 30, 12  
 Row 3: 5, 1, 24, 20, 25, 6, 1, 24  
 Row 4: 6, 25, 6, 36, 3, 36, 5, 4  
 Row 5: 7, 24, 18, 8, 1, 4, 15  
 Row 6: 4, 30, 6, 24, 12  
 Row 7: 36, 5, 15, 4  
 Row 8: 20, 2, 18  
 Row 9: 10, 30, 15  
 Row 10: 16, 24, 8, 3

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# Lets Play

[http://www.softschools.com/math/games/multiplication\\_games/](http://www.softschools.com/math/games/multiplication_games/)

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# Here Are Some References:

[http://www.mathplayground.com/grade\\_3\\_games.html](http://www.mathplayground.com/grade_3_games.html)

<http://www.knowledgeadventure.com/games/quick-math/>

<http://www.primarygames.com/math/grade/grade3-math-games.php>




<http://www.softschools.com/math/games/>

[http://www.softschools.com/coloring\\_games/coloring\\_addition.jsp](http://www.softschools.com/coloring_games/coloring_addition.jsp)



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Apps

		
<b>Mental Math</b> Free 3.9 ★★★★★ 1,438 👤 Free	<b>Math: Mental Math Games</b> 4.5 ★★★★★ 2,084 👤 Free	<b>Mental Math for kids Free</b> 3.8 ★★★★★ 405 👤 Free

More apps



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