

# Multiplication Tricks

Trick 1:- Multiply any No. with 5, 25, 125

↳ Multiplication by 5 =  $\frac{10}{2}$

- Half the no. and add one zero

e.g.  $88 \times 5 \longrightarrow \underline{\underline{440}}$

$44 \times 5 \longrightarrow 220$

$89 \times 5 \longrightarrow 445$

↳ Multiplication by 25 =  $\frac{100}{4}$

- Divide by 4 and put '2' zeros.

e.g.  $88 \times 25 \longrightarrow \underline{\underline{2200}}$

$84812 \times 25 \longrightarrow \underline{\underline{2120300}}$

↳ Multiplication by 125 =  $\frac{100}{4} \times 5$

- Divide by 4 and multiply by 500

Trick 2 : — How to Mul No. Close to 100 : —

eg. (1) 
$$\begin{array}{r} 98 - 2 \\ 96 - 4^x \\ \hline 94 \quad 08 \quad \text{Ans} \end{array}$$

(3) 
$$\begin{array}{r} 103 + 3 \\ 104 + 4 \\ \hline 107 \quad 12 \quad \text{Ans} \end{array}$$

(2) 
$$\begin{array}{r} 96 - 4 \\ 91^* - 9^x \\ \hline \cancel{86} \quad \cancel{87} \quad 36 \end{array}$$

(4) 
$$\begin{array}{r} 99 - 1 \\ 101 + 1 \\ \hline 100 \quad 01 \\ \boxed{99 \quad 99} \quad \text{Ans} \end{array}$$

Trick 3 : — 2 x 2 multiplication (  $\begin{array}{c} \uparrow \quad \nearrow \quad \downarrow \end{array}$  )

(1) 
$$\begin{array}{r} \quad 5 \quad \quad 3 \\ \times \quad 1 \quad \quad 1 \\ \quad 4 \quad \quad 4 \\ \hline 23 \quad 3 \quad 2 \quad \text{Ans} \end{array}$$

$1 + 32 = 33$   
 $3 + 20 = 23$

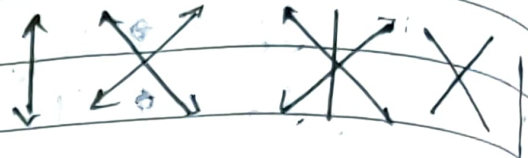
$12 + 20 = 32$

(2) 
$$\begin{array}{r} \quad 6 \quad 2 \\ \quad 5 \quad 8 \\ \hline 35 \quad 9 \quad 6 \quad \text{Ans} \end{array}$$

$1 + 58 = 59$

$5 + 30 = 35$

Trick 4: —  $3 \times 3$  Multiplication.



eg.

$$\begin{array}{r} 1 \quad 2 \quad 3 \\ \times \quad 3 \quad 2 \quad 1 \\ \hline \end{array}$$

$$1 + 8 = 9$$

Ans  $39483$

2.

$$\begin{array}{r} 4 \quad 3 \quad 2 \\ 5 \quad 2 \quad 3 \\ \hline 225936 \end{array}$$

$$1 + 28 = 29$$

$$2 + 23 = 25$$

$$2 + 20 = 22$$

$$\begin{array}{r} 8 \times 15 \\ 23 \end{array}$$

# SQUARE Tricks

$$\begin{array}{ll}
 1^2 = 1 & 12^2 = 144 \\
 2^2 = 4 & 13^2 = 169 \\
 3^2 = 9 & 14^2 = 196 \\
 4^2 = 16 & 15^2 = 225 \\
 5^2 = 25 & \left. \begin{array}{l} 24^2 = 576 \\ 25^2 = 625 \\ 26^2 = 676 \\ 27^2 = 729 \end{array} \right\} \begin{array}{l} \text{93} \\ \text{93} \end{array} \\
 6^2 = 36 & \\
 7^2 = 49 & \\
 8^2 = 64 & \\
 9^2 = 81 & \\
 10^2 = 100 & \\
 11^2 = 121 &
 \end{array}$$

88 is the only no. whose first two and last two digit are same.

No. Closest to 100: —

eg.  $102^2 = 10404$

+2  
100+2

(2)  $103^2 = 10609$

(3)  $107^2 = 11449$

(4)  $98^2 = 9604$   
-2

(5)  $91^2 = 8281$   
-9

(6)  $112^2 + 12 = 12544$   
1

(7)  $118^2 = 13924$   
1

(8)  $99^2 = 9801$   
Ans

(9)  $88^2 = 7744$   
-12  
1 + 76  
Ans

\* Any no. ending with 5

$$\begin{array}{r} 9 \overline{) 15} \\ \times 10 \end{array} = \underline{\underline{90.25}} \text{ Ans}$$

$$\begin{array}{r} 8 \overline{) 5} \\ \times 9 \end{array} = \underline{\underline{72.25}} \text{ Ans}$$

$$6 \overline{) 5} = 42.25$$

$$\begin{array}{r} 10 \overline{) 5} \\ 11 \end{array} = \underline{\underline{110.25}}$$