

Basic Calculations (Vedic Mathematics)

Date: _____

⇒ Quick Multiplication → 2 digit number

$$\begin{array}{r}
 24 \times 43 \Rightarrow \begin{array}{r} 24 \\ \times 43 \\ \hline 1032 \end{array}
 \end{array}$$

① +6 +16
②

Practice Questions

① $23 \times 37 =$

$$\begin{array}{r}
 23 \\
 \times 37 \\
 \hline
 851
 \end{array}$$

② $34 \times 27 =$

$$\begin{array}{r}
 34 \\
 \times 27 \\
 \hline
 918
 \end{array}$$

③ $54 \times 43 =$

$$\begin{array}{r}
 54 \\
 \times 43 \\
 \hline
 2322
 \end{array}$$

⇒ 3-digit numbers

$504 \times 321 =$

$$\begin{array}{r}
 504 \\
 \times 321 \\
 \hline
 161784
 \end{array}$$

① $123 \times 137 =$

$$\begin{array}{r}
 123 \\
 \times 137 \\
 \hline
 16851
 \end{array}$$

② +14 +9 = 23
③ +7 +3 +6 = 16
④ +3 +1 +2 = 6

⇒ Quick Multiplication - by 11

$$45 \times 11 \Rightarrow$$

$$\begin{array}{r} 4+5 \\ \diagdown \quad \diagup \\ 4 \quad 9 \quad 5 \end{array}$$

① 23×11

$$\begin{array}{r} 23 \\ \diagdown \quad \diagup \\ 2 \quad 5 \quad 3 \end{array}$$

② 39×11

$$\begin{array}{r} 39 \\ \diagdown \quad \diagup \\ 3 \quad 12 \quad 9 \end{array}$$

$$\begin{array}{r} 39 \\ \diagdown \quad \diagup \\ 4 \quad 2 \quad 9 \end{array}$$

③ 89×11

$$\begin{array}{r} 89 \\ \diagdown \quad \diagup \\ 9 \quad 7 \quad 9 \end{array}$$

④ 74×11

$$\begin{array}{r} 74 \\ \diagdown \quad \diagup \\ 8 \quad 1 \quad 4 \end{array}$$

⇒ Quick Squaring → for range 0 to 99

① Square of 47 $\Rightarrow (47)^2 \Rightarrow (50-3)^2$

$$= 2500 + 9 - 300 = 2200 + 9 = \underline{\underline{2209}}$$

② Square of 83 $\Rightarrow (83)^2 \Rightarrow (80+3)^2$

$$= 6400 + 9 + 480 = \underline{\underline{6889}}$$

$$\begin{array}{r} 160 \times 3 \\ \hline 480 \end{array}$$

Q3 Square of 96 $\Rightarrow (96)^2 = 96 \times 96$

$96 - 04 \quad | \quad \Rightarrow (100 - 4)^2$

$96 - 04 \quad | \quad = 10000 + 16 - 800 \Rightarrow 9200 + 16$

$92 \quad 16$

$= 9216$

$\frac{140 \times 3}{120}$

Q4 $(67)^2 \Rightarrow (70 - 3)^2 = 4900 + 9 - 420 = 4480 + 9 = 4489$

Quiz

Q1 578×25

578

025

14450

$4 + 35 + 16.25$

Q5 $+25 + 0 + 14 = 44$

Q6 $+10 = 14$

Q2

82

$8 + 56 = 64$

47

3854

Q3

$(92)^2$

\Rightarrow

$92 - 08$

$92 - 08$

$84 - 64$

2 Q5

337

149

50213

Q4

337×149

$6 + 27 + 28 = 61$

Q6 $+27 + 7 + 12 = 52$

46

Q8 $+12 + 3$