

$$\begin{aligned}
 9.76321 &= (9+6+2) - (7+3+1) \\
 0 &= 34567 \\
 &= 17 - 10 \\
 &= 28 \quad ?
 \end{aligned}$$

UNIT DIGIT

7/9/23

- * Basics
- * Model - 1
- * Model - 2
- * Model - 3
- * Example Questions

Basics

9451 (last digit is unit digit)
245645

- ① $936 + 972 + 221 = \dots - 9$
- ② $2369 + 2434 = \dots - 13$
- ③ $93 \times 46 = 18$
- ④ $24 \times 98 \times 236 = 4 \times 8 \times 6 = 22 \times 6 = 12$
- ⑤ $1936 - 243 = 6 - 3 = 3$
- ⑥ $1934 - 239 = 14 - 9 = 5$
- ⑦ $7^3 = 7 \times 7 \times 7 = 49 \times 7 = 63 = 3$
- ⑧ $7^4 = 7^2 \times 7^2 = 49 \times 49 = 81 = 1$
- ⑨ $81^3 = 81 \times 81 \times 81 = 1$

Model - 1

$$0^n = 0 \quad 1^n = 1 \quad 5^n = 5 \quad 6^n = 6$$

$$\textcircled{1} 266^{13} + 395^{45}$$

$$6 + 5 = 11 = 1$$

$$\textcircled{2} 2311^{124} \times 646^{94}$$

$$1 \times 6 = 6$$

Model - 2

$$\begin{array}{l|l} 4^{\text{odd}} = 4 & 9^{\text{odd}} = 9 \\ 4^{\text{Even}} = 6 & 9^{\text{Even}} = 1 \end{array}$$

$$\textcircled{1} 249^{33} + 254^{36} + 256^{133} = ?$$

$$9 + 6 + 6 = 21 = 1$$

Model - 3 (2, 3, 7, 8)

$$\textcircled{1} 212^{79} = 2^3 = 8$$

[Pow ÷ by 4]

$$\textcircled{2} 73^{54} = 3^2 = 9$$

$$\textcircled{3} 378^{41925} = 8^1 = 8$$

$$\begin{aligned} \textcircled{4} 214^{2164} &= 4^4 \quad [\text{Reminder zero} \rightarrow \text{power } 4] \\ &= 16 \times 16 \\ &= 36 = 6 \end{aligned}$$

$$\begin{array}{r} 13 \\ 4 \overline{) 79} \\ \underline{4} \\ 39 \\ \underline{36} \\ 3 \\ 4 \overline{) 54} \\ \underline{4} \\ 14 \\ \underline{12} \\ 2 \\ 6 \overline{) 25} \\ \underline{24} \\ 1 \\ 4 \overline{) 16} \\ \underline{4} \\ 12 \\ \underline{12} \\ 0 \end{array}$$