



| KGS

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DIVISIBILITY RULE

विभाजिता के नियम



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2ⁿ

$$\div 2 \rightarrow 2^{\textcircled{1}} \rightarrow \text{अंतिम } \textcircled{1} \text{ अंक}$$

$$\div 4 \rightarrow 2^{\textcircled{2}} \rightarrow \text{अंतिम } \textcircled{2} \text{ अंक}$$

$$\div 8 \rightarrow 2^{\textcircled{3}} \rightarrow \text{अंतिम } \textcircled{3} \text{ अंक}$$

$$\div 16 \rightarrow 2^{\textcircled{4}} \rightarrow \text{अंतिम } \textcircled{4} \text{ अंक}$$

$$\div 32 \rightarrow 2^{\textcircled{5}} \rightarrow \text{अंतिम } \textcircled{5} \text{ अंक}$$

$$\vdots$$
$$\div 2^{\textcircled{n}} \rightarrow \text{Last } \textcircled{n} \text{ digit}$$

5ⁿ

$$\div 5 \rightarrow 5^1 \rightarrow \text{अंतिम } \textcircled{1} \text{ अंक}$$

$$\div 25 \rightarrow 5^2 \rightarrow \text{अंतिम } \textcircled{2} \text{ अंक}$$

$$\div 125 \rightarrow 5^3 \rightarrow \text{अंतिम } \textcircled{3} \text{ अंक}$$

$$\div 625 \rightarrow 5^4 \rightarrow \text{अंतिम } \textcircled{4} \text{ अंक}$$

$$\vdots$$
$$\div 5^n \rightarrow \text{Last } \textcircled{n} \text{ digit}$$

$\frac{2^n}{5^n}$

$$\# \textcircled{1} \frac{123456\boxed{789}}{8} R \rightarrow 5 \text{Ans.}$$

$$8 \rightarrow 2^3$$

$$\begin{array}{r} 8 \overline{) 789} \quad (98 \\ \underline{-72} \\ 69 \\ \underline{-64} \\ \textcircled{5} \end{array}$$

$$\textcircled{2} \frac{515253565977812\boxed{526}}{125} R =$$

$$\frac{526}{125} \boxed{R \rightarrow 26}$$

$$125 \rightarrow 5^3 \textcircled{3}$$

$\div 3 \rightarrow$ अंको का योग 3 से विभाजित हो तो वह सं० 3 से पूर्णतः विभाजित होगी।

① $56784321 \rightarrow 5+6+7+8+4+3+2+1=36$

$\frac{36}{3} \checkmark$

II-method

① ~~5~~~~6~~~~7~~~~8~~~~4~~~~3~~~~2~~~~1~~ ✓

② ~~9~~~~8~~~~4~~~~3~~~~6~~~~5~~~~3~~~~7~~~~8~~~~4~~~~6~~~~0~~~~9~~~~7~~~~4~~~~3~~~~8~~~~7~~~~5~~ = 7X
 $\div 3 \times$

$\div 6 \rightarrow$ 2 और 3 दोनों विभाजित ही वह सं० 6 से भी पूर्णतः विभाजित ही जा।

① ~~7~~ ~~5~~ ~~8~~ ~~4~~ ~~6~~ ~~3~~ ~~1~~ ~~2~~

$6 \rightarrow 2 \checkmark \times 3 \checkmark$

$\div 6 \checkmark$

② ~~9~~ ~~7~~ ~~5~~ ~~8~~ ~~4~~ ~~5~~ ~~6~~

$6 \rightarrow 2 \checkmark \times 3 \times$

$\div 6 \times$

$\div 12 \rightarrow 3 \times 4$

$\div 24 \rightarrow 3 \times 8$

$\div 15 \rightarrow 3 \times 5$

$\div 18 \rightarrow 2 \times 9$

$\div 20 \rightarrow 4 \times 5$

$\div 35 \rightarrow 5 \times 7$

$\div 72 \rightarrow 8 \times 9$

$\div 99 \rightarrow 9 \times 11$

÷7

① 357

$$\begin{array}{r|l} 35 & 7 \\ -14 & \times 2 \\ \hline 21 & \checkmark \end{array}$$

②

$$\begin{array}{r|l} 425 & 6 \\ -12 & \times 2 \\ \hline 413 & \end{array}$$

③

$$\begin{array}{r|l} 72135 & 5 \\ -10 & \times 2 \\ \hline 7203 & \\ -6 & \times 2 \\ \hline 714 & \end{array}$$

$$\begin{array}{r|l} 41 & 3 \\ -6 & \times 2 \\ \hline 35 & \checkmark \end{array}$$

$$\begin{array}{r|l} 7 & 4 \\ -8 & \times 2 \\ \hline 63 & \checkmark \end{array}$$

NOTE: → यदि 1 अंक के संख्या को 6 बार तथा 6 के गुणाज में लिखी गई सं० 3, 7, 11, 13 तथा 37 से पूर्णतः विभाजित होती हैं।

444444, 5555..... 12बार, 777..... 18बार