

Divisibility Rules

An integer is divisible

by **2**

- if the last digit is even or 0

Example:

$$\begin{array}{l} 10 : 2 \\ 28 : 2 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 17 : 2 \\ 35 : 2 \end{array}$$

by **3**

- if the sum of all digits is divisible by 3

Example:

$$\begin{array}{l} 171 : 3 \\ \downarrow \downarrow \downarrow \\ 1+7+1=9 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 163 : 3 \\ \downarrow \downarrow \downarrow \\ 1+6+3=10 \end{array}$$

by **4**

- if the last 2 digits are 00 or divisible by 4

Example:

$$\begin{array}{l} 116 : 4 \\ 700 : 4 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 107 : 4 \\ 315 : 4 \end{array}$$

by **5**

- if the last digit is 0 or 5

Example:

$$\begin{array}{l} 140 : 5 \\ 815 : 5 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 207 : 5 \\ 532 : 5 \end{array}$$

by **6**

- if it is divisible by 2 and 3

Example:

$$\begin{array}{l} 102 : 6 \\ 1+0+2=3 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 202 : 6 \\ 2+0+2=4 \end{array} \quad \text{X}$$

by **8**

- if the last 3 digits are 000 or divisible by 8

Example:

$$\begin{array}{l} 3120 : 8 \\ 120 : 8 = 15 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 4102 : 8 \\ 102 : 8 = 12,75 \end{array}$$

by **9**

- if the sum of the digits is divisible by 9

Example:

$$\begin{array}{l} 594 : 9 \\ 5+9+4=18 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 336 : 9 \\ 3+3+6=12 \end{array}$$

by **10**

- if it ends in 0

Example:

$$\begin{array}{l} 180 : 10 \\ 650 : 10 \end{array} \quad \checkmark$$

$$\text{X} \quad \begin{array}{l} 217 : 10 \\ 135 : 10 \end{array}$$