

Divisibility

The rules for divisibility are:

A number is divisible by:	If:
2	The last digits is 2, 4, 6, 8 or 0
3	The sum of digits is divisible by 3.
4	The number formed by the last two digits is divisible by 4.
5	The last digit is 0 or 5
6	It is divisible by 2 and 3 at the same time.
8	The number formed by the last three digits is divisible by 8.
9	The sum of digits is divisible by 9.
10	The last digit is 0.

Tell whether each number is divisible by 2, 3, 4, 5, 6, 8, 9, or 10.

432

Divisible by 2: Look at the last digit, it is 2 \rightarrow It is divisible by 2.

Divisible by 3: Add the digits $4 + 3 + 2 = 9$, $9 \div 3 = 3$ it is divisible by 3.

Divisible by 4: Look at the last two digits: $32 \div 4 = 8$ \rightarrow It is divisible by 4.

Divisible by 5: Look at the last digit, it is 2 \rightarrow It is not divisible by 5.

Divisible by 6: 432 is divisible by 3 and 2, so it is divisible by 6.

Divisible by 8: $432 \div 8 = 54$.

Divisible by 9: Add the digits $4 + 3 + 2 = 9$, $9 \div 9 = 1$ \rightarrow It is divisible by 9.

Divisible by 10: Look at the last digit, it is 2 \rightarrow It is not divisible by 10.

Examples:

A- Test each number to determine whether it is divisible by 2, 3, 5, 6, 9, 10.

$$\begin{array}{l} 1) 452 \\ \underline{2} \end{array}$$

$$\begin{array}{l} 2) 810 \\ \underline{2, 3, 5, 6, 9} \end{array}$$

$$\begin{array}{l} 3) 2,770 \\ \underline{2, 5, 10} \end{array}$$

$$\begin{array}{l} 4) 18,054 \\ \underline{2, 3, 6, 9} \end{array}$$

B- Write *True* or *False*.

5) The following numbers: 2, 8, 10 are divisible by 3. **FALSE**

6) The following numbers: 6, 12, 18 are divisible by 2 and 3. **True**

7) All numbers ending in 5 and 0 are divisible by 5. **True**

8) The following numbers: 6, 9, 18, 36, 54, 72 are divisible by 6 and 9. **False**