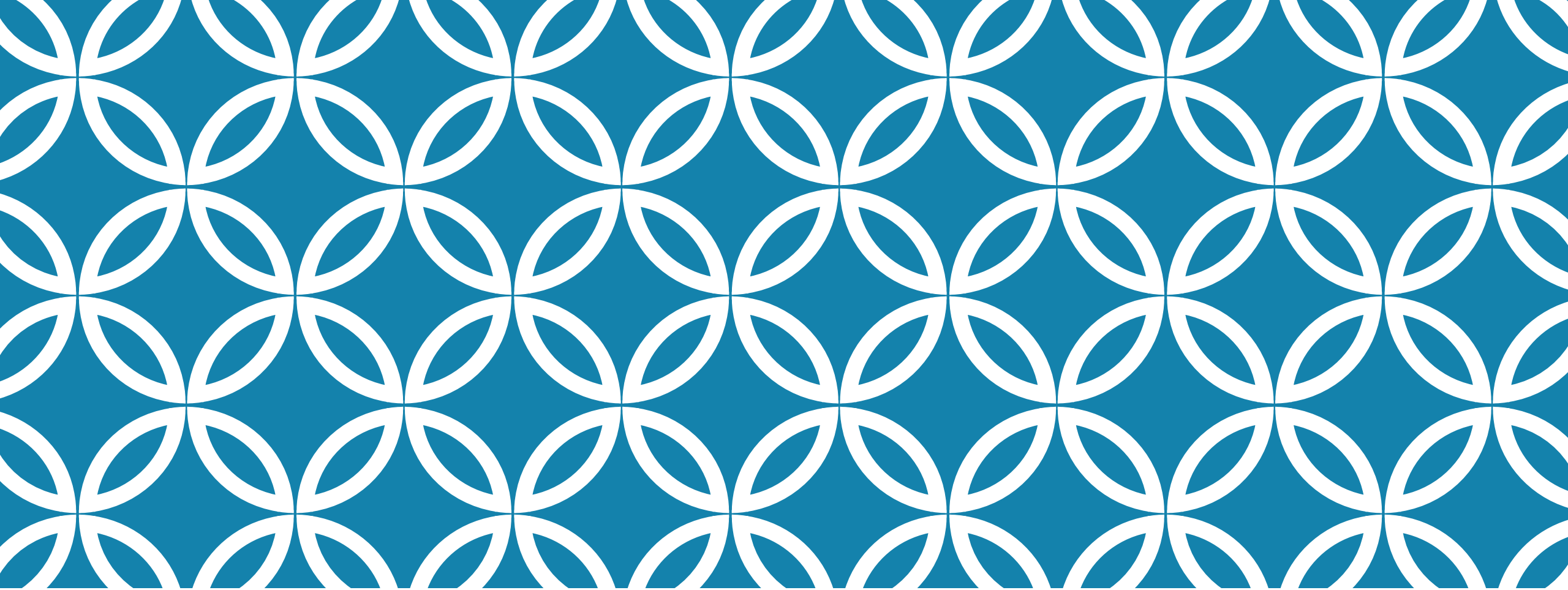

DIVISIBILITY RULES

By 2, 3, 4, 5, 6, 8, 9, 10

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DIVISIBILITY BY “2”

A number is divisible by 2 if its ones digit is even.

Example

82,152 ***Ones Place***

82,152

The once place is “2” since two is an even number

the number 82,152 is divisible by 2

PRACTICE QUESTIONS

Check if the numbers are divisible by 2 ?

1. 56,237
2. 49
3. 124
4. 650

ANSWER

1.	56,237	7 is an odd number	Not Divisible
2.	49	9 is an odd number	Not Divisible
3.	124	4 is an even number	Divisible
4.	650	0 is an even number	Divisible

DIVISIBILITY BY “3”

A number is divisible by 3 if the sum of its digits is divisible by 3.

Example

1. 432

   4+3+2= 9 ⟵ *sum of its digits*

   9 ÷ 3= 3

   because the sum of the digits is 9 and is divisible by 3,

   the number 432 is divisible by 3

PRACTICE QUESTIONS

Check if the numbers are divisible by 3 ?

1. 325
2. 402
3. 663
4. 520

ANSWER

1. 325 3+2+5= 10 10 ÷3 = ? Not Divisible
2. 402 4+0+2=6 6 ÷3= 2 Divisible
3. 663 6+6+3 =15 15 ÷ 3= 2 Divisible
4. 520 5+2+0= 7 7 ÷ 3= ? Not Divisible

DIVISIBILITY BY “4”

A number is divisible by 4 if the number formed by its last 2 digits is divisible by 4.

Example

2,532

2,532 ← ***The last two digits***

$32 \div 4 = 8$

last 2 digits “32” is divisible by 4 so the number 2,532 is divisible by 4

PRACTICE

Check if the numbers are divisible by 4 ?

1. 140
2. 2,121
3. 25,453
4. 11,516

ANSWER

1. 140 Last two digits 40, $40 \div 4 = 10$ Divisible
2. 2,121 Last two digits 21, $21 \div 4 =$? Not Divisible
3. 25,453 Last two digits 53, $53 \div 4 =$? Not Divisible
4. 11,516 Last two digits 16, $16 \div 4 = 4$ Divisible

DIVISIBILITY BY “5”

A number is divisible by 5 if its ones digit is 0 or 5.

Example

13,465

13,465 ← ***Ones Place***

The ones digit is “5” so the number 13,465 is divisible by 5

PRACTICE QUESTIONS

Check if the numbers are divisible by 5 ?

1. 245
2. 1,560
3. 2,468
4. 2,552

ANSWER

1. 245 — ones digit is 5
2. 1,560 — ones digit is 0
3. 2,468 — ones digit is not 0 or 5
4. 2,552 — ones digit is not 0 or 5

DIVISIBILITY BY "6"

A number is divisible by 6 if it is divisible by both 2 and 3.

Example

1. 501

Divisibility by 2

501 ← ***Once Place***

The once place is "1"
since 1 is not an even number
the number 501 is not divisible by 2

Divisibility by 3

5+0+1= 6

The sum of the digits is 6 and is divisible by 3, the number 432 is divisible by 3

The Number 501 is not divisible by both 2 & 3 therefore it is not divisible by 6

PRACTICE QUESTIONS

Check if the numbers are divisible by 6 ?

1. 621

2. 36

3. 420

4. 25

ANSWER

1. 621 by 2 & 3 Not Divisible
2. 36 by 2 & 3 Divisible
3. 420 by 2 & 3 Divisible
4. 25 by 2 & 3 Not Divisible

DIVISIBILITY BY “8”

A number is divisible by 8 if the number formed by its last 3 digits is divisible by 8.

Example

82,648

82,648 ← ***Last 3 digits***

648 ÷ 8 = ____

$$
\begin{array}{r}
81 \\
8\overline{)648} \\
-\,64 \\
\hline
08 \\
-\,8 \\
\hline
0
\end{array}
$$

The last 3 digits is divisible by 8

so the number 82,160 is divisible by 8

PRACTICE QUESTIONS

Check if the numbers are divisible by 8 ?

1. 24,136
2. 2,048
3. 680
4. 1,246

ANSWER

1. 24,136 — 136 ÷ 8 = 17 — Divisible
2. 2,048 — 48 ÷ 8 = 6 — Divisible
3. 680 — 680 ÷ 8 = 85 — Divisible
4. 1,246 — 246 ÷ 8 = ? — Not Divisible

DIVISIBILITY BY “3”

A number is divisible by 3 if the sum of its digits is divisible by 3.

Example

1. 432

   4+3+2= 9 ⟵ *sum of its digits*

   9 ÷ 3= 3

   because the sum of the digits is 9 and is divisible by 3,

   the number 432 is divisible by 3

PRACTICE QUESTIONS

Check if the numbers are divisible by 3 ?

1. 325
2. 402
3. 663
4. 520

ANSWER

1. 325 3+2+5= 10 10 ÷3 = ? Not Divisible
2. 402 4+0+2=6 6 ÷3= 2 Divisible
3. 663 6+6+3 =15 15 ÷ 3= 2 Divisible
4. 520 5+2+0= 7 7 ÷ 3= ? Not Divisible

DIVISIBILITY BY “9”

A number is divisible by 3 if the sum of its digits is divisible by 3.

Example

1. 432

   4+3+2= 9 ← *sum of its digits*

   9 ÷ 9= 1

   because the sum of the digits is 9 and is divisible by 9,

   the number 432 is divisible by 9

PRACTICE QUESTIONS

Check if the numbers are divisible by 3 ?

1. 325
2. 402
3. 663
4. 520

ANSWER

1. 325 3+2+5= 10 10 ÷9 = ? Not Divisible
2. 422 4+2+2=9 9 ÷9= 1 Divisible
3. 693 6+9+3 =18 18 ÷ 3= 2 Divisible
4. 520 5+2+0= 7 7 ÷ 9= ? Not Divisible

DIVISIBILITY BY “10”

A number is divisible by 10 if its ones digit is 0.

Example

82,152

82,152

The ones place is “2” since it is not 0

82,152 is not divisible by 10

PRACTICE QUESTIONS

Check if the numbers are divisible by 10 ?

1. 400
2. 49
3. 120
4. 352

ANSWER

1. 400 Ones Place is 0 Divisible
2. 49 Ones Place is not 0 Not Divisible
3. 120 Ones Place is 0 Divisible
4. 352 Ones Place is not 0 Not Divisible

SUMMERY

2	A number is divisible by 2 if its ones digit is even.
3	A number is divisible by 3 if the sum of its digits is divisible by 3.
4	A number is divisible by 4 if the number formed by its last 2 digits is divisible by 4.
5	A number is divisible by 5 if its ones digit is 0 or 5.
6	A number is divisible by 6 if it is divisible by both 2 and 3.
8	A number is divisible by 8 if the number formed by its last 3 digits is divisible by 8.
9	A number is divisible by 9 if the sum of its digits is divisible by 9.
10	A number is divisible by 10 if its ones digit is 0.

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