## Divisibility

## Rules



## What is Divisibility?

## Divisibility

 means that after dividing, there will be NO remainder.
## g

## 356,821

- Can you tell by just looking at this number if it is divisible by 2?
- by 5 ?
- by 10 ?
- by 3 ?
- The divisibility rules can help you !!!
- by 9 ?
- By 6 ?


## Divisibility Rules

help you learn shortcuts to tell when a number can be divided by another number with NO remainder.

## Divisibility by 2

- A number is divisible by 2 if the number
is even.

$$
\begin{aligned}
& 18 \div 2=9 \\
& 22 \div 2=11
\end{aligned}
$$

(Notice that both of these numbers are even.)
$21 \div 2=10 \mathrm{R} 1$
(Not an even number.)

Are these numbers divisible
by 2?

- 127
(Not an even number)
- 937
(Not an even number)
- 4678



## Divisibility by 5

- A number is divisible by 5 if it ends in 0 or 5.

$$
\begin{aligned}
& 25 \div 5=5 \\
& 23 \div 5=4 R 3
\end{aligned}
$$

## Divisibility by

- A number is divisible by 10 if it ends in 0 .
- $30 \div 10=3$
- $340 \div 10=34$
- $67 \div 10=6$ RT
- $784 \div 10=78$ R4


## Divisibility By:

|  | 2 | 5 | 10 |
| :---: | :---: | :---: | :---: |
| 1825 |  | $\ddots$ |  |
| 346 | $\ddots$ |  |  |
| 510 | $\ddots$ | $\ddots$ | $\ddots$ |
| 1108 | $\ddots$ |  |  |

## Divisibility by 3

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

Is the number 135 divisible by 3 ?

$$
\text { Add the digits: } 1+3+5=9
$$

Yes, 135 is divisible by 3 because the sum of the digits is divisible by 3.

## Divisibility by

- A number is divisible by 9 if the sum of its digits is divisible by 9 .
- 369 is divisible by 9
because

$$
\begin{gathered}
3+6+9=18 \\
1+8=9
\end{gathered}
$$

AND

9 is divisible by 9 .

## Divisibility by 6

- A number is divisible by 6
by both
- Is 42 divisible by $6 ?$
- Is 51 divisible by 6 ?

2 and 3.

## After All...DIVISIBILITY Rules!!



$$
\begin{aligned}
& \text { Divisibility is } \\
& \text { Un-frog-getable !! } \\
& \text { The End !! }
\end{aligned}
$$

## THE END



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