

Divisibility Rules

Numbers that are divisible by 2 end in __, __, __, __, or __.

Numbers that are divisible by 5 end in either __ or __.

Numbers that are divisible by 10 end in __.

Division rule for 3 is different. No longer do we check in what the number ends:

- If the sum of the digits of the number is divisible by 3, so is the number itself.

In other words, we add the digits of the number, and if that is divisible by 3, so is the original number.

- Is 546 divisible by 3? Yes, because $5 + 4 + 6 = 15$, and 15 is divisible by 3.
- Is 739 divisible by 3? No, because $7 + 3 + 9 = 19$, and 19 is not divisible by 3.

Practice

1. Fill in the chart.

Number	sum of digits	divisible by 3	division result
a. 771	15	yes	$771 \div 3 = \underline{\quad}, R \underline{\quad}$
b. 8096			$8096 \div 3 = \underline{\quad}, R \underline{\quad}$
c. 2304			$2304 \div 3 = \underline{\quad}, R \underline{\quad}$
d. 7653			$7653 \div 3 = \underline{\quad}, R \underline{\quad}$
e. 400			$400 \div 3 = \underline{\quad}, R \underline{\quad}$
f. 1000			$1000 \div 3 = \underline{\quad}, R \underline{\quad}$

What is the remainder if the number IS divisible by 3?

2. Fill in the chart.

Number	sum of digits	divisible by 3
4589		
4590		
4591		