

Name : _____

Score : _____

Teacher : _____

Date : _____

Is the **Number** to the left of each row divisible by the **Number** at top of each column? Write YES or NO in each box.

	2	3	4	5	6	9
81						
15						
17						
89						
31						
84						
83						
61						
66						
33						
14						
51						

Divisibility Rules

Divisor	Divisibility Condition	Example
2	The last digit is even (0, 2, 4, 6, or 8).	38 : 2 is even which is divisible by 2.
3	The sum of the digits is divisible by 3. For large numbers, digits may be summed iteratively.	4,053 => 4+0+5+3=12 and 1+2=3 which is clearly divisible by 3.
4	Add the ones digit to twice the tens digit. (All digits to the left of the tens digit can be ignored.)	7,372 : 2 + (2 x 7) = 16 which is clearly divisible by 4.
	The last two digits divisible by 4.	20,516 : 16 is divisible by 4.
	If the tens digit is even, and the ones digit is 0, 4, or 8. If the tens digit is odd, and the ones digit is 2, or 6.	728 : 2 is even, & the last digit is 8. 356 : 3 is odd, & the last digit is 6.
5	The last digit is 0 or 5.	1,285 : the last digit is 5.
6	If it is divisible by 2 and by 3.	2,562 : 2 + 5 + 6 + 2 = 15, which it is divisible by 3, and the last digit is even which is divisible by 2, so the number is divisible 6.
8	If the last three digits are divisible by 8, then the entire number is also divisible by 8.	1,024 : 024 is divisible by 8 so, 1,024 is also divisible by 8.
9	The sum of the digits is divisible by 9. For large numbers, digits may be summed iteratively.	1,269 => 1+2+6+9=18 and 1+8=9 which is clearly divisible by 9.

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	2	3	4	5	6	9
81	NO	YES	NO	NO	NO	YES
15	NO	YES	NO	YES	NO	NO
17	NO	NO	NO	NO	NO	NO
89	NO	NO	NO	NO	NO	NO
31	NO	NO	NO	NO	NO	NO
84	YES	YES	YES	NO	YES	NO
83	NO	NO	NO	NO	NO	NO
61	NO	NO	NO	NO	NO	NO
66	YES	YES	NO	NO	YES	NO
33	NO	YES	NO	NO	NO	NO
14	YES	NO	NO	NO	NO	NO
51	NO	YES	NO	NO	NO	NO

