

Is the number 1,234,567,890 divisible by 9?

Here's the "rule": add the digits up, keep adding until you get a single digit. If it is 9, then yes. Otherwise no.

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 0 = 45$$

and

$$4 + 5 = 9.$$

So yes!!

Sanity check: $1,234,567,890 = 9 * 137,174,210$, so it does!