

Atlantic and Pacific Rule

The Atlantic-Pacific Rule says:

"If a decimal point is **Present**, ignore zeros on the **Pacific** (left) side. If the decimal point is **Absent**, ignore zeros on the **Atlantic** (right) side. Everything else is significant."

What these means is when the decimal point is present, take your finger and start on the left side of your number. Slide your finger until you hit the first nonzero number. This number and everyone after it will be significant.

When the decimal point is absent start on the right side, take your finger and move it across the number to the left until you get the first nonzero number. This number and every number after will be significant.

The Alternative rule is:

1. Ignore leading zeros.
2. Ignore trailing zeros, unless they come after a decimal point.
3. Everything else is significant.

Number	Atlantic-Pacific rule	Scientific notation rule
0.001010	decimal point Present: ignore zeros on the Pacific side. 4 sig. digits.	In scientific notation: 1.010×10^{-3} . 4 sig. digits. The decimal point moved past the three leading zeros; they vanished.
0.30000	decimal point Present: ignore zeros on the Pacific side. 5 sig. digits.	In scientific notation: 3.0000×10^{-1} . 5 sig. digits. The decimal point bumped past the leading zero; it vanished.
100.0000	decimal point Present: ignore zeros on the Pacific side (none!) 7 sig. digits.	In scientific notation: 1.000000×10^2 . The decimal point moved past two zeros, but they aren't trailing zeros; they're in the middle of the number. 7 sig. digits.
12303000	decimal point Absent: ignore zeros on the Atlantic side. 5 sig. digits.	In scientific notation: 1.2303×10^7 . The decimal point moved past the trailing three zeros; they vanished. It moved past the zero between the threes, too, but that's not a trailing or leading zero; it stays. 5 sig. digits.



Reference:

<http://antoine.frostburg.edu/chem/senese/101/measurement/faq/print-simple-sigfig-rules.shtml>