

Significant Figures - Counting



Key idea

Significant figures show how **precise** a number is.

How to count

1. Start at the first non-zero digit.
2. Count all digits after it (zeros included).
3. Trailing zeros after a decimal count too.

Examples

804 has **3** s.f. (middle zero counts).

0.450 has **3** s.f. (final zero shows precision).

Common mistake

Do not count leading zeros. In 0.0036 the zeros only place the decimal — it has **2** s.f.



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Round To Significant Figures



To 2 s.f.

Round 47.26 to 2 s.f.

Keep the first two: 4 and 7.

Next digit is 2 (< 5), so 7 stays.

Answer: 47.

With leading zeros

Round 0.00784 to 2 s.f.

First two s.f. are 7 and 8.

Next digit is 4 (< 5), so 8 stays.

Answer: 0.0078.

Common mistake

Keep the leading zeros as placeholders — they hold the decimal point but are not counted.



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Answer To The Right Precision



Key idea

An answer can be no more precise than the **least precise** value you used.

Example

Work out 3.41×2.0 .

$$3.41 \times 2.0 = 6.82$$

But 2.0 has only 2 s.f., so round to 2 s.f.

Answer: 6.8.

Common mistake

Do not copy all the calculator digits. If the data has 2 s.f., the answer should too.



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