

# The difference between ACCURACY & PRECISION

We use several words when describing measurement results. This poster should help you understand some of these words.

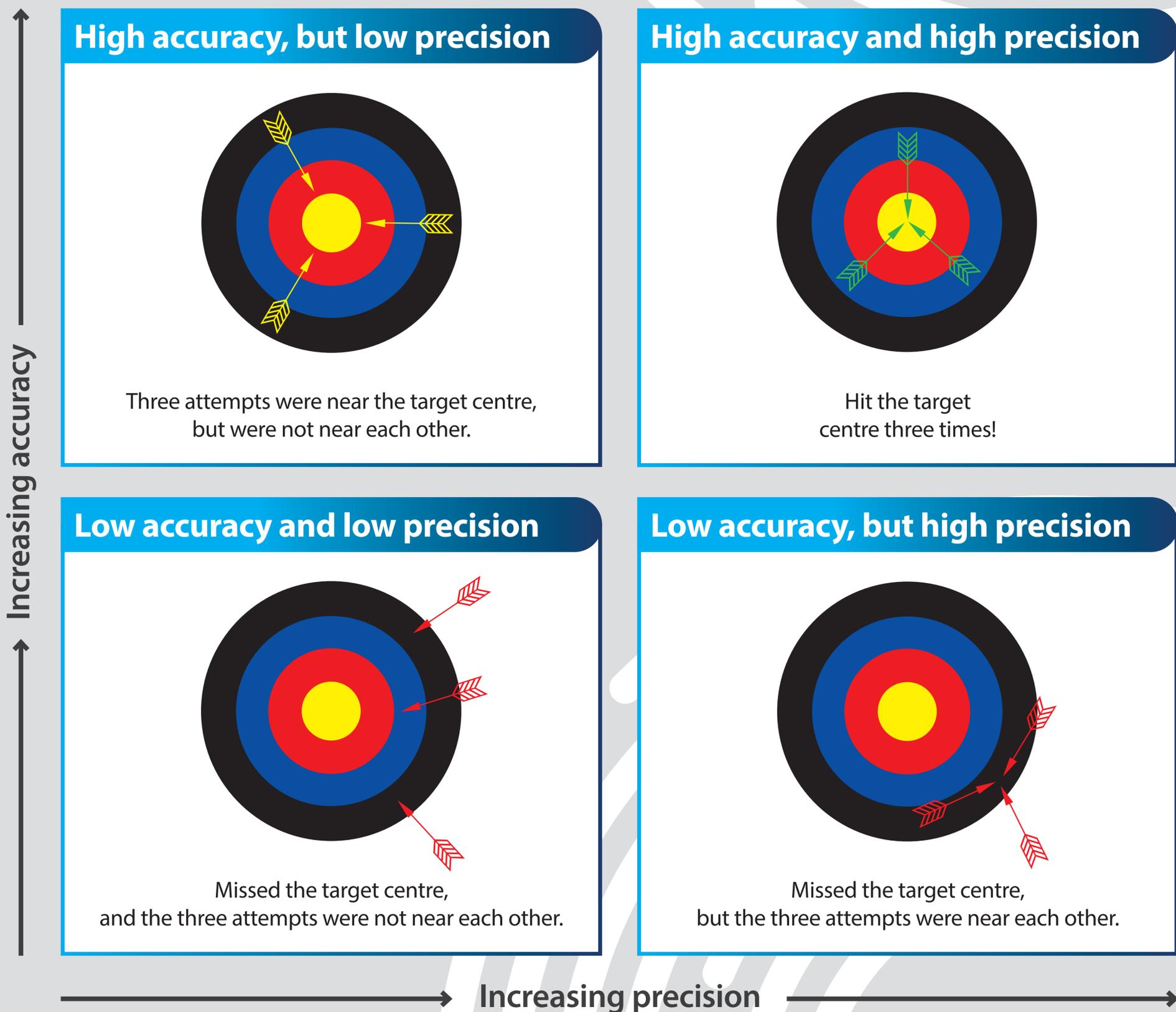


**Accuracy** is a qualitative term that describes how close the measurements are to the actual (true) value.

**Precision** describes the spread of these measurements when they are repeated.

**Resolution** is the smallest difference that can be meaningfully distinguished. For example, a change of one in the last place of a digital display.

Even when we are **precise** and **accurate**, there will still be some **uncertainty** in our measurements. The challenge for anyone doing measurements – and that is everyone (not just scientists and engineers) – is to assess the uncertainty and make it as small as appropriate for a particular application. For example, you do not need to measure cake ingredients with an uncertainty of millionths of a gram.



## Did you know?

The National Physical Laboratory (NPL) develops and maintains the UK's primary measurement standards, which are used to check the accuracy of instruments used by thousands of other organisations making millions of measurements.



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