

Metrology

Measurement in Sport

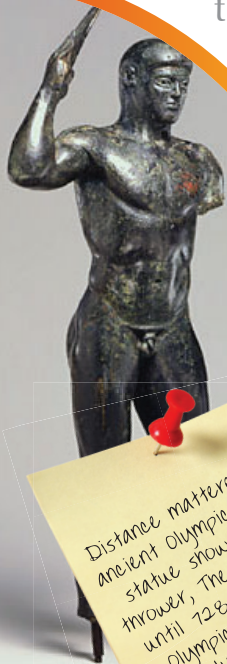
Distance

From the millimetres that separate losers from winners in archery to the 42,195 metres of a marathon, exact distances are part of many Olympic events.

Rods and rulers are often used to mark out distances – but they need careful design. Objects change length as temperature rises and falls, and as a result, rulers are longer at the Summer Olympics than at the Winter games. So it is essential to choose a material that expands very little with temperature.

Did you know? In the 1908 London Olympics, 385 yards were added to the planned 26-mile marathon route, so that the race finished at the royal box. The resulting distance, 42,195 metres, later became the standard.

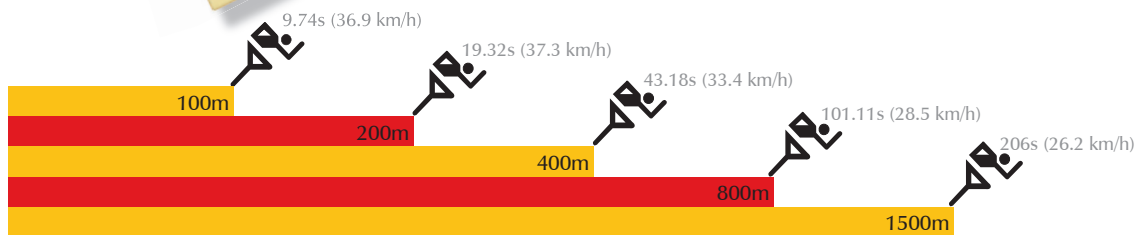
And how do we know a metre rod really is a metre long? Until 1960, the ultimate standard of lengths were actual rods held in national laboratories, but length standards are now optical and based on the unchanging properties of light.



Distance mattered in the ancient Olympics too: this statue shows a discus thrower. The many years, until 728 BC, the only Olympic event was a (roughly) 200 m sprint



Olympic distance, world record times and average speeds



World Metrology Day 20 May 2008

No games without Measurement

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