

Metrology

Measurement in Sport



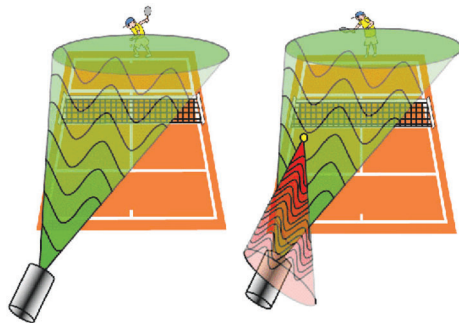
Speed

Speed is key to winning many Olympic events, but it is not used to score any of them.

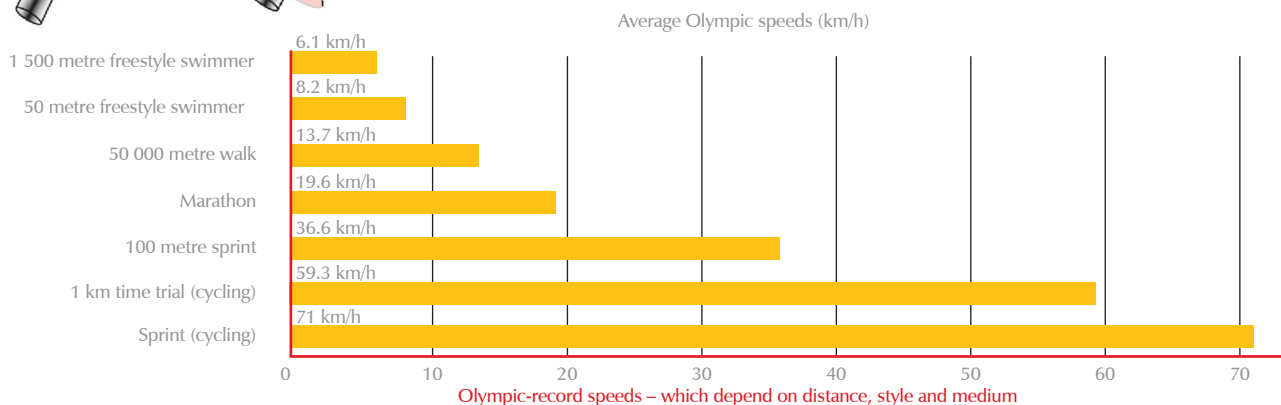
Speed is the distance travelled in a certain time, so in the Olympics it is usually these two quantities that are measured.

Did you know? Asafa Powell of Jamaica is officially the fastest man in the world, running 100m in 9.74 seconds (an average speed of about 37 km/h).

Many Olympic cyclists make use of speedometers to keep track of their performance, and marathon runners use GPS receivers to determine their speeds. Another way to measure speed is by a Doppler radar system (see diagram).



The Doppler effect means that the light from an object approaching you becomes slightly more blue (or more red if the object is receding). The changes are too small to see. The effect applies to radio waves and sound too – which is why a motor bike or train whistle falls in pitch as the vehicle passes. For the Olympics, it is radio waves that are used.



World Metrology Day 20 May 2008

No games without Measurement

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