



Team

Rank

Fermi Questions

- 1 What is the mass of a billion billion billion carbon atoms? kg
- 2 What is the temperature at the surface of the Sun? K
- 3 How long will it take for a relativistic particle to do a circuit of the Large Hadron Collider (circumference 27 km)? s
- 4 How many hydrogen atoms are there in the Earth's oceans?
- 5 By how much does the water in a 800 m high waterfall heat up if its potential energy is converted into thermal energy? K
- 6 A fly lands on the Queen Mary 2 ocean liner.
How much lower in the water will the ship settle? m
- 7 What is the orbital speed of the Moon around the Earth? m/s
- 8 How many permutations can be made of the letters in the word 'dermatoglyphics'?
- 9 Fifty years ago this month Sputnik 1 was launched.
What was its kinetic energy when in orbit around the Earth? J
- 10 What is the half-life of the radioactive isotope carbon-14? s
- 11 What is the angle subtended by a Boeing 747 flying at a cruising altitude of 10,000 m (as seen from the ground)? rad
- 12 What is the pressure at the bottom of the deepest ocean? atms
- 13 If the entire world population came to Liverpool at the same time, by how much would the Earth's centre of mass shift? m
- 14 How many sides does a square have?