

Make sure you put your TEAM NUMBER on the test, otherwise this cannot be scored

# Fermi Question 2016 Cy Falls Invitational

# ANSWER KEY

1. How many new, unsharpened, standard-sized pencils laid end to end along the longest axis would it reach from the Sun to the Galactic center of the Milky Way?
2. The Chunnel connects England and France via a big tunnel under the English Channel. How many standard sized volley balls placed side by side would it take to go from one end of the Chunnel to the other?
3. How many atoms of an ideal gas would it take to fill an average sized classroom to a pressure of 7atm at zero Celsius? Assume the gas is monoatomic.
4. How many furlongs are in 5 parsecs?
5. How many angstroms are in 20,000 US nautical leagues?
6. How many nickels would it take to cover an area the size of Brazil?
7. What is the ratio of the radius of Earth's orbit around the Sun to the radius of the planet Earth
8. How many math text books would it take to equal the volume of the Antarctic Ice sheet?
9. What is the atomic radius of Carbon if measured in miles?
10. The Pacific Crest National Scenic Trail goes from the Mexican border just south of Campo California to the Canadian border in Manning Park, British Columbia. How many steps would an average sized human take if they hiked the whole trail?
11. How many sugar cubes would it take to build a pyramid equal in size to the Great Pyramid at Giza?
12. How many light years is it from Houston to El Paso?

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