



SCIENCE OLYMPIAD
AT THE
UNIVERSITY OF FLORIDA

Northern Regional: January 19th, 2019

Fermi Questions C Test

Name(s): _____

Team Name: _____

School Name: _____

Team Number: _____

Rank: _____

Score: _____

Fermi Questions

North Regional Science Olympiad Tournament

Names _____

Team # _____

This test will be composed of 30 questions. Your answers are to be given in order of magnitude. For a number in the form $C \times 10^E$, the guide for rounding the coefficient (C) is: if C is 5 or greater, round C up to 10. For example, if the number is 5.001×10^5 the correct answer is 6. Responses given in scientific notation, decimal format, or any other format that is not the order of magnitude will be marked as incorrect. You will get 5 points for a correct answer, 3 for an error of one order of magnitude, 1 for an error of two orders of magnitude, and 0 for anything else. Do your best, answer as many as you can, and have as much fun taking it as I had writing it.

Goodluck!



1.) How many grains of rice would it take to weigh as much as the biggest cruise ship in the world?

2.) How many miles long is an aglet?

3.) What is the length of the Kentucky Derby in furlongs?

4.) How many lumens per square foot does the Sun emit on Earth?

5.) How many standard sheets of paper would it take to stack as tall as the Eiffel Tower?

6.) How many nautical miles long is a standard Hot Wheels Car?

7.) What's the weight of the Earth given in Cubic Meters of Styrofoam?

8.) How many Christmas Trees were sold in the US last year?

9.) How many drops of water does it take to fill a gallon jug?

10.) How many drops of water does it take to fill an Olympic Swimming Pool?

11.) How many grams of chocolate does the world's largest chocolate factory produce each year?

12.) How long is the Appalachian Trail in inches?

13.) How long is the Silk Road in light years?

14.) How long, in seconds, would a garden snail take to travel from Gainesville to Miami?

15.) How long, in seconds, would that same snail take to travel to Jupiter?

16.) How many iPhones are produced each day?

17.) According to Stratus VOS, how many jiffys does it take to revolve around the sun?

18.) How many Skittles would it take to fill the Earth?

19.) How many years long is the movie The Titanic?

20.) How many hairs does the average dog have per square inch of skin?

21.) 67584⁶

22.) How many standard playing cards weigh as much as an average Boeing 747?

23.) How many standard poker chips would you need to balance the weight of a cubic meter of pure gold?

24.) How many pounds of bananas could LeBron James buy with his 2018 NBA Salary alone?

25.) How many Reese's Peanut Butter Cups would you need to have the same mass as Pluto?

26.) 67^{-24}

27.) If you were counting up, starting at 1, at the tempo of *Staying Alive* by the Bee Gees, how long would it take, in hours, to count up to 45 trillion?

28.) 3^{20}

29.) How many Rubik's cubes could fit in the Atlantic Ocean and its adjacent seas?

30.) What is the mass of the sun in units of Fun Size Milky Ways?