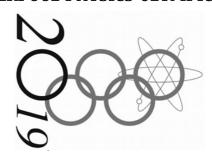
LIVERPOOL PHYSICS OLYMPICS

Team	
Rank	



Fermi Questions

1	How many people were in The Beatles?	1	
2	How many neutrons are there in a typical neutron star?	57	
3	What pressure is exerted by an astronaut's feet when standing on the moon?	3	Pa
4	How long ago did men first walk on the moon?	9	S
5	What is the gravitational force between two electrons on opposite sides of a helium atom?	- 50	N
6	What is the average vertical growth rate of an oak tree from germination to maturity?	-8	m/s
7	How far away from your eye would you have to hold an LPO mug for its base to have the same apparent diameter as the moon?	1	m
8	How many times would you have to fold a sheet of graphene to get a thickness sufficient to reach the moon?	2	
9	How many known moons are orbiting planets in our solar system?	2	
10	What is the combined electric charge of all the electrons in your team?	10	С
11	What was the momentum of the Apollo spacecraft when cruising from the earth to the moon?	8	kgm/s
12	How much energy would be released if an LPO mug-full of antiwater annihilates with normal water?	17	J
13	If the kinetic energy of a raindrop falling to earth is converted into heat, by how much will the raindrop's temperature rise?	-2	к
14	What acceleration is needed to keep the moon in orbit around the earth?	-3	m/s ²