

Mathematics 3260H – Geometry II: Projective and Non-Euclidean Geometry
TRENT UNIVERSITY, Fall 2019

Assignment #12
An Application?

Due on Monday, 2 December.

Please read *A Contribution to the Mathematical Theory of Big Game Hunting*, by H. Pétard*, which appeared in *The American Mathematical Monthly*, Vol. 45, No. 7 (Aug. – Sep., 1938), pp. 446–447. It should be available in electronic form from the JSTOR archive via Bata Library. A slightly modified version of this article can also be found at:

http://komplexify.com/math/humor_pure/HuntingLions.html

1. Devise three new and original ways to (ab)use geometry to capture a lion in the Sahara desert. [10]

Bonus. Determine whether there is an integer $n > 1$ such that there is a projective plane of order n (*i.e.* with $n + 1$ points on each line) such that $n \neq p^k$ for any prime number p and integer $k \geq 1$. [Success = 100% on the final mark in MATH 3260H]

* This is apparently a pseudonym of Ralph Boas.