Mathematics 2200H − Mathematical Reasoning
Trent University, Fall 2025
Assignment #12
A Change of Pace: An Application of Abstract Mathematics
Due on Friday, 5 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. Among many other places, this article can also be found at:

https://gwern.net/doc/math/humor/lion-hunting/1938-petard.pdf

1. Devise three new and <u>original</u> ways to (ab)use mathematics to capture a lion in the Sahara desert. *[10]*

Bonus. Pick any one of $\pi + e$, $\pi - e$, $\pi \cdot e$, and $\dfrac{\pi}{e}$ and determine, with a complete proof, whether it rational or irrational. *[Success = 100% on the final mark in MATH 2200H]*

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[*] Please submit your solutions, preferably as a single pdf, via Blackboard's Assignments module. If that fails, please submit them to the instructor on paper or via email to sbilaniuk@trentu.ca as soon as you can.

[†] This is apparently a pseudonym of Ralph Boas.