

## 2021 Shardhunt Physics Challenge: Extra Credit

## Instructions:

- All answers should be rounded to the nearest integer.
- The earth's acceleration due to gravity is assumed to be  $10 \text{ m/s}^2$ .
- Air resistance is negligible.
- All units are SI unless otherwise stated.
- Rotating hexes is not necessary.





**EC1** The Time Traveler is planning his second expedition. For each year he travels into the future, his circuit must supply an additional 5 Watts of power. If the voltage of his battery is 7759.056 Volts and the total resistance of his circuit is 15 Ohms, how far can he travel into the future?

