

Class 19: Some Rocket Calculations

Calculus II

College of the Atlantic. Feb 17, 2025

1. What is the total mass of the rocket, engine, and altimeter? The altimeter has a mass of approximately 6.5 grams and the battery's mass is around 46 grams.
2. For what time duration does the rocket engine provide thrust for?
3. What is the average force on the rocket due to the engine during the thrust phase?
4. What is the force on the rocket due to gravity during the thrust phase?
5. What is the net force on the rocket during the thrust phase?
6. What is the acceleration of the rocket during the thrust phase?
7. What is the velocity of the rocket at the end of the thrust phase?
8. What is the altitude of the rocket at the end of the thrust phase?