

Chapter 5, Question 5: Rocket Equation

Consider two rockets a single-stage and a two-stage rocket. The two rockets are designed so that they have the identical propellant mass, the identical total mass, and the identical sp . Assuming that both are launched vertically, gravity is constant, and drag is zero, which of the following is correct?

- 1) The two rockets will go the same distance
- 2) The single stage rocket will go farther
- 3) The two-stage rocket will go farther
- 4) I don't know

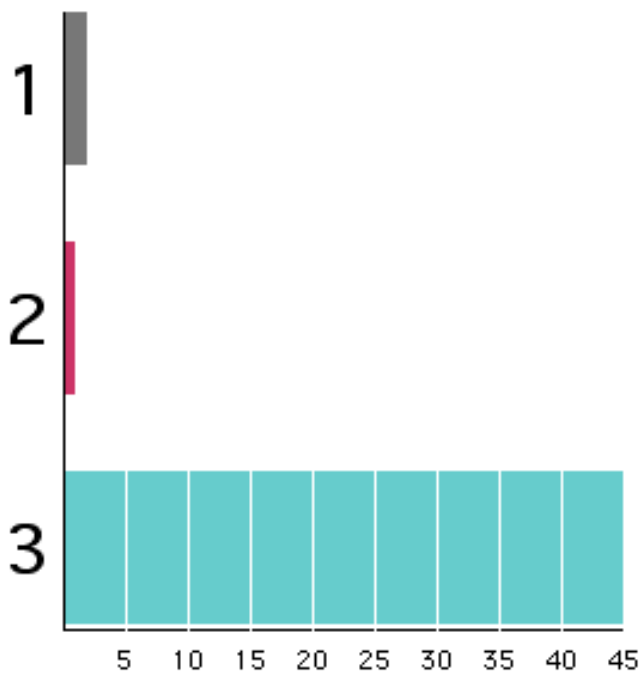
Chapter 5, Question 4 Answer:

The correct answer is 3) the two stage rocket will go further

Two stage rockets derive their principal performance benefit from dropping structural weight as they go. So for the same force from the rocket engine, then the acceleration increases ($F=ma$).

Class performance (2003):

Question 2 : Question 2



Class performance (2001):

Quiz 2 started at 9:43:39 AM

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