

practice.09.18.08

1. A mousetrap car accelerates for 16.6 ± 0.3 ft in 4.45 s.

(a) What is the % uncertainty of the distance. (You do not need to put units in showing your work for % uncertainty and % error)

(b) What is the distance in meters? **Show work with units**

(c) What is the acceleration of the mousetrap car? **Show work with units**

2. What is the maximum velocity that the mousetrap car reaches? **Show work with units**

3. What is the average velocity of the mousetrap car during the acceleration? **Show work with units**

4. The mousetrap car goes an additional 55 ft. before it comes to a stop.

(a) What is this distance in meters? **Show work with units**

(b) What is the *magnitude* (negative or positive) of the acceleration that brings the mousetrap car to a stop? **Show work with units**

5. Your speedometer state that you are traveling at 65 mi/h but a policeman clocks you at 72 mi/h. What is the % error of your speedometer? (You do not need to put units in showing your work for % uncertainty and % error)