

Distance, time, speed, acceleration problems

Handy facts:

Speed of sound = 340 m/s

Speed of light = 3.00×10^8 m/s

1. At what average speed must a car move in order to cover a total distance of 15 miles in $\frac{1}{2}$ hour?
2. A garden snail named Archie, owned by Carl Branhorn of Pott Row, England, covered a 0.33 meter course in 120 seconds at the 1995 World Snail Racing Championships, held in Longhan, England. Calculate the average speed of the champion snail.
3. If Archie continued to travel for an hour at the same speed as in problem 2, how far would he go?
4. The cheetah can run up to 33.5 m/s in short bursts. At that speed, how long would it take to cover 500 meters?
5. It has been reported that a cheetah can accelerate from 0 to 27.8 m/s in 3 seconds. Calculate the acceleration of the cheetah.
6. What is the acceleration of a car which was moving at 44 ft/s and was brought to rest in 2 seconds?
7. How long does it take sound to travel from one end of a football field to the other end? The length of a football field is 91.4 meters.
8. How long does it take light to get from one end of a football field to the other end? The length of a football field is 91.4 meters.
9. Someone said that it takes 8 minutes for light to get from the Sun to the Earth. How far is it from the Sun to the earth?