

Challenge Problem: 10

A certain cable car in San Francisco can stop in 10 s when travelling at its maximum speed v_0 . The driver sees a dog on the track at distance d in front of the car and slams on the brake instantly. The car reaches the dog 8 s later, and the dog jumps out of the way just in time. The car comes to a stop 4 m beyond where the dog was. What was the initial distance d ?

