

Kinematic Equations Worksheet II

1. A car slows from 22 m/s to 3.0 m/s at a constant rate of 2.1 m/s^2 . How many seconds are required before the car is traveling at 3.0 m/s?
2. An airplane starts from rest and accelerates at a constant 3.00 m/s^2 for 30.0 s before leaving the ground.
 - a. How far did it move?
 - b. How fast was it going when it took off?
3. A park ranger driving on a back country road suddenly sees a deer “frozen” in her headlights. The ranger, who is driving at 11.4 m/s, immediately applies the brakes and slows with an acceleration of 3.80 m/s^2 .
 - a. If the deer is 20.0 m from the ranger’s vehicle when the brakes are applied, how close does the ranger come to hitting the deer?

