Notes: Kinematics Part 2

NAME:

Kinematic Equation

v_{final}	
$v_{initial}$	
a	
t	

How to Solve a Kinematics Problem

1. Read the following problem
2. Highlight your "proof" for assigning variables
3. List the givens
4. Solve
5. Write your answer with the proper units

A fully loaded Boeing 747 with all engines at full thrust accelerates at 2.6 m/s^2. Its minimum takeoff speed is 70 m/s. How much time will the plane take to reach its takeoff speed?

- Initial velocity - m/s, starting from rest, initially/beginning, how fast...
- Final velocity - m/s, comes to a stop/rest, finally/end, how fast...
- Acceleration - m/s^2
- Time - s, how long...

Givens	Work

Answer

Small frogs that are good jumpers are capable of remarkable acceleration. One species reaches a takeoff speed of 3.7 m/s in 0.060 s. What is the frog's acceleration during the jump?

- Initial velocity - m/s, starting from rest, initially/beginning, how fast...
- Final velocity - m/s, comes to a stop/rest, finally/end, how fast...
- Acceleration - m/s^2
- Time - s, how long...

Givens	Work

Answer