## AP Physics - Homework Oh the Homework - 4

emaN $\qquad$ Per $\qquad$


Copyright 〕 2001 United Feature Syndicate, Inc. So many centuries after the Creation, it is unlikely that anyone could find hitherto unknown lands of any value. -Spanish Royal Commission, rejecting Christopher Columbus' exploration proposal

1. A can of tuna is dropped from a building. If the can takes 3.2 seconds to strike the ground, what distance did it fall?
2. An engine falls off of a 737 from a height of 2500 m . Ignoring wind resistance, how fast is the thing traveling when it smacks into the turf?
3. A ball is thrown straight down from a bridge with an initial velocity of $18.5 \mathrm{~m} / \mathrm{s}$. If it travels for 2.3 sec , how high is the bridge?
4. A ball, initially at rest, rolls down a ramp. It experiences an acceleration of $1.2 \mathrm{~m} / \mathrm{s}^{2}$ If it is rolls a distance of 1.8 m , how fast is it traveling?
5. A ball is thrown straight up. If its initial velocity is $24 \mathrm{~m} / \mathrm{s}$, how high does it rise before it begins falling down?
6. A ball is thrown straight up, it rises 12.5 m before it falls back down. (a) What was its initial speed? (b) how much time is it in the air?
7. A ball is thrown straight down from a bridge with an initial velocity of $18.5 \mathrm{~m} / \mathrm{s}$. The bridge is 22.0 m above the river. How much time to hit the water?
