Grading scheme

Each homework problem will be graded on a basis of 10 points according to the following point distribution:

- 2 points for listing the known and unknown variables with proper numerical values and units
- 2 points for listing the major concept(s) and the proper equations needed. **Points will be taken off for writing down random, non-applicable equations.**
- 1 point for drawing a diagram correctly, where applicable.
- 2 points for plugging in the proper numbers/variables in the equations (correct sign, correct units corresponding to all numbers)
- 1 point for the correct numerical/variable answer
- 1 point for the correct unit with the answer
- 1 point for neatness. The homework should be handed in on white 8.5x11 paper. Multiple pages should be stapled together. The homework should be done in pencil; mistakes should be erased, not crossed off. The final answer should be boxed. The graders are instructed to take extra points off the total score for not complying with these rules. The final grade will be listed at the top of the front page, then a few points could be subtracted for neatness, where neatness would mean any of these offenses.

Here is an example made up and worked out by one of your graders to illustrate the steps you would have to go through to complete a problem. What I would like to add at the end of this is: ***Does the answer make sense?***

A wacky physics teacher is driving a Mercedes Benz to Case from home (60 km away). How long will it take to arrive at Case if the car accelerates at 3 m/s^2 from rest (zero velocity initially)?

LIST KNOWNS:
initial velocity of car= 0 m/s
distance to destination= 60 km
acceleration = 3 m/s^2

UNKNOWN DESIRED:
time (t)=?

IMPORTANT EQUATION(S):
x=(vo)t+1/2at^2

SOLVE/SIMPLIFY/PLUG INTO EQUATION:

x=1/2at^2 (since vo=0!)

(2x/a)^1/2= t

(2(60,000m)/(3 m/s^2))^ 1/2=t (Note: must convert distance from km to m to balance)

t= 200s (units & numerical answer important)

BONUS QUESTION
At what speed does the wacky physics prof smash into the Veale parking deck having forgotten to decelerate as well?