AP Physics 1 Name: _____

Unit 1 1D Motion Quiz Class Period: _____

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1. For a period of 30 s, a fast llama is found to have a speed of 20 m/s. In that same time, the llama's velocity was found to be exactly -20 m/s. What can you infer about the llama's motion from this? Answer in one sentence (or less).

(2-3) Show all steps required to arrive at your answer and give answers with the correct units if applicable. Most of your grade on the following questions will be based on correct justification and not the final answer. **A correct answer with no justification will receive no credit.** Ensure to include all answers with correct answer. Please circle your final answers.

2. A train is moving at some speed when it slams on the brakes. The brakes provide an acceleration of magnitude ***A***. The train travels a distance ***D*** before stopping.

a) Determine the time it takes the train to stop.

b) Determine the speed the train was traveling before using its brakes.

3. Dr. Dre drops a beet off the roof a building that has a height of 90 m. It lands on the ground below.

a) Determine the time the beet was in the air.

b) Determine the speed with which the beet hits the ground.