| Test 1 — Outline (Revised 8/28/19) | |
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| Course Information: Phys 2A | Instructor Name: John R. Walkup |

### Equations Provided

***d*** = ***v***o*t* + (1/2)***a****t*2 ***v*** = ***v***o + ***a****t*

These are all the equations you will need other than simple trigonometric identities used for summing vectors. Use *g* = 10 m/s2. You may not use the equation beginning *v*2 = in any solution.

### Multiple-Choice Questions

1. This question will center on understanding the vector property of velocity or acceleration.
2. This question will center on the concept of acceleration. I will throw an object directly upwards and ask you a conceptual question about its motion.
3. This question will center on understanding proper sign convention with respect to displacement, velocity, and acceleration.
4. Either Problem 2 or Problem 10 from Assignment 1.
5. This problem will be pulled directly from Homework Assignment 2, Problems 1-5.
6. This problem will also be pulled directly from Homework Assignment 2, Problems 1-5.
7. This problem will be pulled directly from Homework Assignment 3.
8. Problem 7 from Homework Assignment 3. The numbers will change, but that’s all.
9. Problem 10 from Homework Assignment 3. The numbers will change, but that’s all.
10. I will present a graph of time versus displacement, velocity, or acceleration. At some time on the graph, I will ask you to tell me information about the motion of the object. Study Problems 2 – 5 on Assignment 3.
11. Another graph problem much like the previous problem.
12. I will see whether you understand the physical meaning of each term in the displacement and velocity equations of motion.
13. Read the lecture notes on Determinism. If you read them and understand them, you should be able to answer this question.
14. I will give you three vectors and ask you to sum them head-to-tail. You will then choose the resultant vector that matches the correct result.
15. Wild card
16. Wild card

### Free Response Problems

1. I will provide you with two vectors, including their lengths and directions. You will sum the vectors using the component method and choose the correct resultant vector. (Note: Using the head-to-tail or parallelogram methods will not be sufficient to answer the question.)
2. TBD
3. Wild card