



AP[®] Physics C: Mechanics 2003 Scoring Commentary

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**AP[®] PHYSICS C: MECHANICS
2003 SCORING COMMENTARY**

Question 1

Sample A (Score 15)

This response contains the alternate solution for part (c), involving an integral.

Sample C (Score 10)

This student forgets to square the velocity when substituting in part (b) i, and loses that point. Part (c) is incorrect; since F is not constant it cannot simply be multiplied by the position function to determine the work.

Question 2

Sample F (Score 15)

This is the kind of orderly, clear response, stating the principles used and showing all work, that helps ensure awarding of partial credit if the student had made any errors.

Sample G (Score 12)

This response is correct except for part (d), where the student equates a correctly done integral to a calculation of force times distance that is incorrect for a variable force and also irrelevant to the problem.

Question 3

Sample K (Score 15)

This response is extremely explicit throughout, leaving no doubt as to the student's meaning.

Sample M (Score 12)

In part (b) iii, the student only includes the projectile in calculating the final energy, and only earns 2 points there.