Corrections to the practice exam for exam III:

- Number 1 is correct as written, and the answer is (a).
  [Note: when this question was on last year's exam, students were provided with the double-angle formula cos 2A = 2 cos<sup>2</sup> A 1.]
- The answer to number 2 is (c):  $8\pi$ .
- Number 3 contains a type: the description of the lamina should be  $\Omega = \{(x, y) : x^2 + y^2 = \pi^2, y \ge 0\}$  (not  $x^2 + y^2 = \pi$ ). The answer is (a).
- Numbers 4 6 are correct as written, and their answers are all (a).
- Number 7 contains a typo: "the volume of" is written twice; otherwise, it's fine, and the answer is (a).
- Number 8 contains a typo: the function inside the integral is listed as "x = 2y". It should be "x 2y". The answer is -16, which is not listed as one of the choices.

[Note: even if you assume the function should be x + 2y, the answer you get is still not one of the listed choices.]

- Number 9 contains a typo: the transformation should include y = 2v, NOT y = 3v. The answer is 0, which is not listed as one of the choices.
- The answer to number 10 is 30, which is not listed as one of the choices.
- Numbers 11 and 12 are correct as written, and their answers are (a).

Answers to the long-answer questions for practice exam III:

- The answer to number 13 is  $\frac{81}{5}$ .
- The answer to number 14 is  $\frac{16}{3}$ .
- The answer to number 15 is (0, 0, 15).