Answers to Test 3, Fall 2001

1.   (a) $-1/12$

     (b) π

2.   (a) 16

     (b) -2

3. $3\pi/2$

4. $(x, y, z) = (3\sqrt{3}/2, 3/2, 3\sqrt{3})$

   $(r, \theta, z) = (3, \pi/6, 3\sqrt{3})$

5. 26

6. $\displaystyle\int_{\pi/4}^{\pi} \int_{0}^{2\pi} \int_{0}^{2\sqrt{2}} \rho^2 \sin\phi \, d\rho \, d\theta \, d\phi$

7. 2π

8. 2π