Answers to the Four Practice Exams for Exam II

First Practice Exam

1. 7

2. -8

3. $\frac{40960\pi}{11}$

4. $\frac{3}{2}$

5. $\frac{32\sqrt{2}}{5}$

6. $\frac{\pi}{4}(e^9 - 1)$

7. $3e^9$

8. $\frac{32}{45}$

9. 3456

10. 35 .

Second Practice Exam

1. $f = e^x + e^y + e^z + xyz$.

2. $1 - \cos(11\pi/26)$ (also $1 - \sin(\pi/13)$).

3. $-6(u - v)(u - w)(v - w)$

4. $\frac{280}{3}$

5. $-\frac{1}{3}$ (corrected Nov. 13, 2009, 11:07am, thanks to Elazar Klein, who won \$10).

6. $\frac{3^{12}}{8}\pi$

7. $\frac{8}{15}$

8. $\frac{16 \ln 2}{3}$

9. $\int_0^1 \int_e^{e^3} f(x, y)\, dx\, dy + \int_1^3 \int_{e^y}^{e^3} f(x, y)\, dx\, dy$

10. None ; $\frac{-17}{8}$ at $(1/2, 1/2)$ and $(-1/2, -1/2)$; $(0, 0)$

Third Practice Exam

1. $\frac{e^6-1}{2}$

2. 7

3. $\frac{2\pi(3^{21}-1)}{21}$

4. Picture

5. -4

6. $\frac{162}{5}$

7. $\frac{1}{6}$

8. $\frac{16}{63}$

9. None; None; $(3,-3)$ and $(-3,3)$.

10. $\frac{5}{8}$

Fourth Practice Exam

1. 8

2. 136

3. 54

4. $e-1$

5. $\frac{\pi(e-1)}{8e}$

6. $\frac{\pi(1-e^{-4})}{8}$ (or $\frac{\pi(e^4-1)}{8e^4}$)

7. $\frac{2\sqrt{2}-1}{10}$

8. $1+5\sqrt{13}$; $1-5\sqrt{13}$

9. $\frac{8}{15}$

10. $\int_0^8 \int_0^{\sqrt[3]{y}} g(x,y)\,dx\,dy$