

Calculus II Fall 2017 Final Exam Answers

1a. $\frac{2}{7}$

1b. $\frac{1}{2}xe^{2x+3} - \frac{1}{4}e^{2x+3} + C$

1c. $\frac{1}{21}\sin^3(7x) - \frac{2}{35}\sin^5(7x) + \frac{1}{49}\sin^7(7x) + C$

1d. $\frac{1}{25}\frac{\sqrt{x^2-25}}{x} + C$

1e. $-\frac{1}{6}\ln|x-1| + \frac{1}{15}\ln|x+2| + \frac{1}{10}\ln|x-3| + C$

1f. $-\frac{1}{4}$

2. $\frac{22\pi}{21}$

3a. diverges

3b. diverges

3c. converges

3d. converges

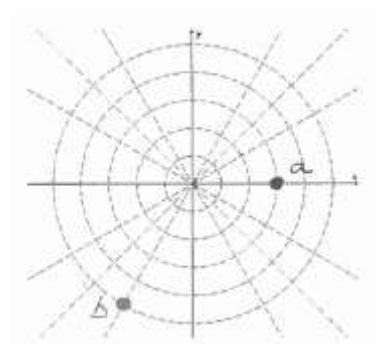
4. $(-\infty, \infty)$

5. $(\frac{5}{2}, \frac{7}{2}); \frac{1}{7-2x}$

6. $\sum_{n=0}^{\infty} \frac{e^2}{n!} \cdot (x-2)^n$

7a. (3,0)

7b. $(-\frac{5}{2}, -\frac{5\sqrt{3}}{2})$



8a. $(2, \frac{\pi}{4})$

8b. $(8, \frac{5\pi}{6})$