Mini-exam 3 (10 points total) Math 141, Summer 2015

Name:

Problem 1 Find $\lim_{n\to\infty} \frac{(-1)^n(\ln n)^2}{n}$.

(a) 1

(b) e^2

(c) $-\infty$

(d) 0

(e) $+\infty$

Problem 2 Find $\int_1^4 \frac{1}{3-x}dx$.

(a) $\ln 2$

(b) $\ln 3$

(c) $\ln \frac{1}{2}$

(d) The integral diverges.

(e) 0

Problem 3 Show that $\int_{-\infty}^{\infty} x^3 e^{x^4} dx$ diverges.

Problem 4 When does $\sum_{n=1}^{\infty} \frac{x^n}{4^{n+1}}$ converge?

(a) $|x| < 1$

(b) $|x| < \frac{1}{4}$

(c) $0 < x < 4$

(d) $-1 < x < 2$

(e) $|x| < 4$

Problem 5 Compute $\sum_{n=1}^{\infty} \frac{(-3)^{n-1}}{4^n}$.

(a) $\frac{1}{7}$

(b) $\frac{-1}{7}$

(c) $\frac{-7}{4}$

(d) $\frac{7}{4}$

(e) 7

Feedback:

1. What aspects of the course have been helpful in your learning?

2. What aspects of the course could use improvement?

3. Any comments on the lecture format?