Miniexam 3 (8 points total)

Math 141, Summer 2016

Name:

Problem 1 Suppose that $\sum_{n=1}^{\infty} a_n = 10$. Find $\lim_{n\to\infty} \frac{a_n+3}{2}$.

(a) 0

(b) $\frac{3}{2}$

(c) $\frac{13}{2}$

(d) 2

(e) ∞

Problem 2 Does the series converge? If so, find its value.

$$\sum_{n=1}^{\infty} \left(\frac{1}{2n} - \frac{1}{2n+2} \right)$$

Problem 3 Evaluate the following improper integrals. (i) $\int_1^4 \frac{dx}{3-x}$; (ii) $\int_{-\infty}^{\infty} \frac{dx}{x^2+1}$ (recall: $\int \frac{dx}{x^2+1} = \tan^{-1} x + C$).

Feedback:

1. Any comments (on lectures, homework, quizzes, course, me, etc.)?