

MA 166: Quiz 8

TA: Carlos Salinas

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You have **15 minutes** to complete this quiz. You may work in groups, but you are not allowed to use any other resources.

Problem 1. For **one** of the problems below, determine whether the series is convergent or divergent. If it is convergent, find its sum. Please justify your answer.

(a) $\sum_{n=1}^{\infty} \frac{n}{n+1}.$

(b) $\sum_{n=1}^{\infty} \frac{5^n}{3^{n+1}}.$

(c) $\sum_{n=1}^{\infty} \frac{7}{4^{n+2}}.$

Problem 2. For **one** of the problems below, determine whether the series is convergent or divergent. State clearly what test you are using and verify that the conditions of the test are satisfied.

(a) $\sum_{n=1}^{\infty} \frac{1}{n \ln n}.$

(b) $\sum_{n=1}^{\infty} \frac{1}{\sqrt{n^2 - 3}}.$