

Quiz 10

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. (2 marks) §8.2 #15 Determine whether the series is convergent or divergent. If it is convergent, find its sum.

$$\sum_{n=1}^{\infty} \sqrt[n]{2}$$

Question 2. (4 marks) §8.2 #20 Determine whether the series is convergent or divergent by expressing S_n as a telescoping sum. If it is convergent find its sum.

$$\sum_{n=1}^{\infty} \frac{2}{n^2 + 4n + 3}$$

Question 3. (4 marks) §8.1 #27 Find the values of x for which the series converges. Find the sum of the series for those values of x .

$$\sum_{n=1}^{\infty} \frac{x^n}{3^n}$$