

Math 132 - Quiz 5

April 7, 2021

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary. This quiz is due April 14.

1. (2 points) Use a partial fraction decomposition to rewrite the terms of the series. Then determine if the series converges or diverges. If it converges, find the sum.

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

2. (2 points) Determine whether the series converges or diverges. If it converges, find the sum.

$$\sum_{n=2}^{\infty} \frac{11}{4^n}$$

Turn over.

3. (6 points) Determine whether each series converges or diverges. Be sure to show work and/or explain your reasoning.

(a) $\sum_{n=0}^{\infty} \tan^{-1} n$

(b) $\sum_{n=0}^{\infty} \frac{1}{n^2 + 4}$

(c) $\sum_{n=1}^{\infty} \frac{n^3}{\sqrt{n^7} + 5}$