

Math 172 - Quiz 12

November 29, 2017

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Write the first five terms of the sequence whose n th term is given.

(a) $a_n = \frac{3n}{n+4}$

(b) $a_n = 4 + \cos \pi n$

(c) $a_n = n \sin \frac{1}{n}$

2. (4 points) Determine whether each sequence above converges or diverges. If it converges, find the limit.

3. (2 points) Write the first five terms of the recursively defined sequence.

$$a_0 = 1; \quad a_1 = 1; \quad a_{n+1} = a_n + a_{n-1}, \quad n = 1, 2, 3, \dots$$