

Math 2260 Quiz 13

Name _____

Points will be deducted for untidy or disorganized answers

1. (1 point) Give a formula for the n th term of the following sequences:

(a) *Every other even positive integer*, namely

$$\{2, 6, 10, 14, \dots\}$$

(b) *The reciprocal of every odd positive integer*, namely

$$\left\{1, \frac{1}{3}, \frac{1}{5}, \frac{1}{7}, \dots\right\}$$

2. (4 points) Which of the following sequences converge, and which diverge? Find the limit of each convergent sequence.

(a) $a_n = \frac{n^2 + 7n}{10 - 3n^2}$

(b) $b_n = \frac{\cos n}{n}$

(c) $c_n = \frac{2^n}{n}$

(d) $d_n = \ln(n(n+1)^{-1})$