

## Quiz 2

1. What can the TA do to help you prepare for exams?
2. Let  $\{a_n\}$  be a sequence starting from  $a_1$ . Find  $a_n$ .

(a)	$a_1 = 1$	$a_2 = 3$	$a_3 = 5$	$a_4 = 7$	...
(b)	$a_1 = 1$	$a_2 = \frac{1}{2}$	$a_3 = \frac{1}{4}$	$a_4 = \frac{1}{8}$	...
(c)	$a_1 = -1$	$a_2 = 1$	$a_3 = -1$	$a_4 = 1$	...
(d)	$a_1 = 1$	$a_2 = -1$	$a_3 = 1$	$a_4 = -1$	...
(e)	$a_1 = \frac{1}{2}$	$a_2 = \frac{2}{3}$	$a_3 = \frac{3}{4}$	$a_4 = \frac{4}{5}$	...

3. For the sequences in 2, if we chose a large value of  $n$ , what would be expected of the value of  $a_n$ ?

## Additional Exercises

1. Compute the limit:

$$\lim_{n \rightarrow \infty} \frac{2n + 3}{n}$$

2. Compute the limit:

$$\lim_{n \rightarrow \infty} \frac{(-1)^n}{n}$$

3. Compute the limit:

$$\lim_{n \rightarrow \infty} n(-1)^n$$

4. Compute the limit:

$$\lim_{n \rightarrow \infty} \frac{3n^2 + 2n + 1}{2n + 1}$$