Full Name:
Student Number:
Department:

QUIZ 1

1 (3 pts) Find a formula for the general term of the sequence

$$\left\{ \frac{1}{2}, -\frac{4}{3}, \frac{9}{4}, -\frac{16}{5}, \frac{25}{6}, \dots \right\}$$

assuming that the pattern of the first few terms continues.

2 (7 pts) Consider the sequence whose general term is

$$a_n = \ln(2n^2 + 1) - \ln(n^2 + 1).$$

Find the limit of the sequence, or show that it diverges.