

**12th June**

Corbettmaths

Simplify

$$\frac{x-2}{x+1} + \frac{x+3}{x^4} \div \frac{2x+6}{x^3}$$

The  $n$ th term of a sequence is

$$n^2 - 2n + 11$$

The difference between two consecutive terms is 21.

Work out the two terms

Find the set of values of  $x$  for which

$$f(x) = 300x - 4x^3$$

is an increasing function

Solve

$$3\tan x = 4\sin x$$

for  $0^\circ < x < 360^\circ$