

You can use the (ans) button on the calculator to speed this process up.
To do this

$$u_{n+1} = u_n^2 - 7u_n + 4$$

$$u_1 = 2$$

- $u_1 = 2$, so to set this up on the calculator type in (2=). This will save 2 as the answer.
- so now we can type into the calculator $\text{Ans}^2 - 7\text{Ans} + 4 = -6$, so $u_2 = -6$
- now to find u_3 you can simply press = again to find that $u_3 = 61$
- and again - $u_4 = 6187$

Practice question

A sequence is defined by $x_{n+1} = \frac{x_n - 3}{1 + 2x_n}$

Given that $x_1 = 2$, find the values of x_2 , x_3 and x_4 .

$x_1 = 2$ - using calculator starting with (2=

$$x_2 = -0.2$$

$$x_3 = -5.3$$

$$x_4 = \cancel{-5.33333} 0.8620689655$$