

$$f(x) = \sqrt{5x} + 1$$

$$U_1 \approx 3.236$$

$$U_2 \approx 5.022$$

$$U_3 \approx 6.011$$

$$U_4 \approx 6.482$$

$$U_{n+1} = f(U_n) = \sqrt{5U_n} + 1$$

$$U_0 = 1$$

$$\lim U_n = \frac{7 + 3\sqrt{5}}{2} \approx 6.854.$$

u_0

u_1

u_2

u_3

u_4