Ecce 
$$x^{x+1} = (x+1)^x \Big|_{x>0}$$
  
 $h(z) = z^{-z} - z - 1$   
 $z_{i+1} = z_i - \frac{h(z_i)}{\frac{dh(z_i)}{dz}} \Big|_{z_0 = e - 1}$   
 $x = \frac{1}{z_n}$