WHAT IS THE PROB. THAT A MALE LINE OF DESCENT WILL BEFORE EXTINCT?

$$a_0 = 0.48235$$
$$a_k = (0.2126)(0.5893)^{k-1} \quad k \geq 1$$

$$G(s) = 0.48235 + \sum_{k=1}^{\infty} (0.2126)(0.5893)^{k-1} s^k$$

$$= 0.48235 + \frac{0.2126}{0.5893} \sum_{k=0}^{\infty} (s \cdot 0.5893)^k =$$

$$G(s) = 0.48235 + \frac{0.2126}{1 - 0.5893 \cdot s}$$

$G(s) = s$

$e = 0.819$