Thorpgenue Hena X II 4 u X e IN+ u Y e IN+. Thoraba
$$g_{x+y}(s) = g_x(s)g_y(s)$$

Dows $g_{x+y}(s) = f_s^{x+y} = \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} s^{x}j+i \ P(x=j)Y=i) = \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} s^{j}s^{j} P(x=j)P(y=i) = \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} s^{j}s^{j} P(x=i)P(y=i) = \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} \sum_{i=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} \sum_{i=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} \sum_{j=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} s^{j}s^{j} P(y=i) = \sum_{j=0}^{\infty} s^{j}s^{j} P(y=i) = \sum$

$$i=0 \quad j=0$$

=
$$\frac{2}{5} s^{i} P(y=i) = \frac{2}{5} s P(x=j) = \frac{1}{5} f s^{y} f s^{x} = gx(s) gy(s) #$$