

EXEMPLO 18



Resolver a equação $A_{x,2} = 12$.

$$A_{n,p} = \frac{n!}{(n-p)!}$$

$$\frac{x!}{(x-2)!} = 12$$

$$x! = 12 \cdot (x-2)!$$

$$x(x-1)\cancel{(x-2)!} = 12\cancel{(x-2)!}$$

$$x^2 - x = 12$$

$$x^2 - x - 12 = 0$$

$$\Delta = (-1)^2 - 4 \cdot 1 \cdot (-12) = 49$$

$$x = \frac{1 \pm 7}{2} \rightarrow \begin{matrix} \nearrow 4 \\ \searrow -3 \end{matrix} \rightarrow \text{n\~{a}o conv\~{e}m}$$

$A_{x,2}$

$$\begin{cases} x \in \mathbb{N} \\ x \geq 2 \end{cases}$$

$$S = \{4\}$$