

## EXEMPLO 21



Resolver a equação  $C_{x,2} = 15$ .

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

$$\frac{x!}{2!(x-2)!} = 15$$

$$x! = 15 \cdot 2! \cdot (x-2)!$$

$$x(x-1)\cancel{(x-2)!} = 15 \cdot 2 \cdot \cancel{(x-2)!}$$

$$x^2 - x = 30$$

$$x^2 - x - 30 = 0$$

$$\Delta = 1 + 120 = 121$$

$$x = \frac{1 \pm 11}{2} \rightarrow \begin{matrix} \text{6} \\ -5 \end{matrix} \rightarrow \text{não conuém}$$

$$C_{x,2}$$

$$x \in \mathbb{N}$$

$$x \geq 2$$

$$S = \{6\}$$