

## COMBINATORIA

Problema 32 :

Hallar el valor de  $m$  para que se verifique:

$$V_{m,2} + V_{m-1,2} + V_{m-2,2} = 62$$

Solución Problema 32:

$$V_{m,2} + V_{m-1,2} + V_{m-2,2} = 62$$

$$m(m-1) + (m-1)(m-2) + (m-2)(m-3) = 62$$

$$m(m-1) + (m-1)(m-2) + (m-2)(m-3) = 62$$

$$m^2 - m + m^2 - m - 2m + 2 + m^2 - 3m - 2m + 6 = 62$$

$$3m^2 - 9m - 54 = 0$$

Simplificando entre 3:

$$m^2 - 3m - 18 = 0$$

$$m = \frac{3 \pm \sqrt{9 + 72}}{2} = \frac{3 \pm \sqrt{81}}{2} = \frac{3 \pm 9}{2} =$$

$$m_1 = \frac{3 + 9}{2} = \frac{12}{2} = \mathbf{6}$$

$$m_2 = \frac{3 - 9}{2} = \frac{-6}{2} = \mathbf{-3}$$