

ou encore

$$\begin{aligned}
 & N_{(a, b, c, \dots, m, n)} [A \geq B \geq C \geq \dots \geq M \geq N] \\
 &= \left[(a + \beta + \gamma + \dots + \mu + \nu) + \left(\frac{\beta - \alpha}{\alpha - \beta} \right) + \left(\frac{\gamma - \alpha}{\alpha - \gamma} \right) + \right. \\
 &+ \left(\frac{\delta - \alpha}{\alpha - \delta} \right) + \dots + \left(\frac{\nu - \alpha}{\alpha - \nu} \right) + \left(\frac{\gamma - \beta}{\beta - \gamma} \right) + \left(\frac{\delta - \beta}{\beta - \delta} \right) + \dots \\
 &\quad \dots + \left(\frac{\nu - \beta}{\beta - \nu} \right) + \left(\frac{\delta - \gamma}{\gamma - \delta} \right) + \left(\frac{\varepsilon - \gamma}{\gamma - \varepsilon} \right) + \dots \\
 &\quad \dots + \left(\frac{\nu - \gamma}{\gamma - \nu} \right) + \dots + \left(\frac{\nu - \mu}{\mu - \nu} \right) + \\
 &+ \left(\frac{\alpha}{(\alpha - \beta)(\alpha - \gamma)} - \frac{\beta}{(\alpha - \beta)(\beta - \gamma)} + \frac{\gamma}{(\alpha - \gamma)(\beta - \gamma)} \right) + \\
 &+ \left(\frac{\alpha}{(\alpha - \beta)(\alpha - \delta)} - \frac{\beta}{(\alpha - \beta)(\beta - \delta)} + \frac{\delta}{(\alpha - \delta)(\beta - \delta)} \right) + \\
 &+ \left(\frac{\alpha}{(\alpha - \beta)(\alpha - \varepsilon)} - \frac{\beta}{(\alpha - \beta)(\beta - \varepsilon)} + \frac{\varepsilon}{(\alpha - \varepsilon)(\beta - \varepsilon)} \right) + \dots \\
 &\dots + \left(\frac{\lambda}{(\lambda - \mu)(\lambda - \nu)} - \frac{\mu}{(\lambda - \mu)(\mu - \nu)} + \frac{\nu}{(\lambda - \nu)(\mu - \nu)} \right) + \\
 &+ \left(- \frac{\alpha}{(\alpha - \beta)(\alpha - \gamma)(\alpha - \delta)} + \frac{\beta}{(\alpha - \beta)(\beta - \gamma)(\beta - \delta)} - \right. \\
 &\left. - \frac{\gamma}{(\alpha - \gamma)(\beta - \gamma)(\gamma - \delta)} + \frac{\delta}{(\alpha - \delta)(\beta - \delta)(\gamma - \delta)} \right) \\
 &+ \dots \\
 &+ \left(-1 \right)^{n_1 - 1} \left(\frac{\alpha}{(\alpha - \beta)(\alpha - \gamma) \dots (\alpha - \nu)} - \right. \\
 &\quad \left. - \frac{\beta}{(\alpha - \beta)(\beta - \gamma) \dots (\beta - \nu)} + \dots \right. \\
 &\quad \left. \dots + (-1)^{n_1 - 1} \left(\frac{\nu}{(\alpha - \nu)(\beta - \nu) \dots (\mu - \nu)} \right) \right] \Phi
 \end{aligned}$$

ou après simplifications

$$\begin{aligned}
 & N_{(a, b, c, \dots, m, n)} [A \geq B \geq C \geq \dots \geq M \geq N] = \\
 &= \left[(a + \beta + \gamma + \dots + \mu + \nu) + \frac{\beta - \alpha}{\alpha - \beta} + \frac{\gamma - \alpha}{\alpha - \gamma} + \frac{\delta - \alpha}{\alpha - \delta} + \dots \right. \\
 &\dots + \frac{\nu - \alpha}{\alpha - \nu} + \frac{\gamma - \beta}{\beta - \gamma} + \frac{\delta - \beta}{\beta - \delta} + \dots + \frac{\nu - \beta}{\beta - \nu} + \frac{\delta - \gamma}{\gamma - \delta} + \\
 &\quad \left. + \frac{\varepsilon - \gamma}{\gamma - \varepsilon} + \dots + \frac{\nu - \gamma}{\gamma - \nu} + \dots + \frac{\nu - \mu}{\mu - \nu} \right] \Phi
 \end{aligned}$$

Mais

$$a + \beta + \gamma + \dots + \mu + \nu = (a + b + c + \dots + m + n) + (a_1 + b_1 + c_1 + \dots + m_1 + n_1)$$

et d'autre part

$$\begin{aligned}
 & \frac{\beta - \alpha}{\alpha - \beta} + \frac{\gamma - \alpha}{\alpha - \gamma} + \frac{\delta - \alpha}{\alpha - \delta} + \dots + \frac{\nu - \alpha}{\alpha - \nu} + \frac{\gamma - \beta}{\beta - \gamma} + \frac{\delta - \beta}{\beta - \delta} + \dots \\
 &+ \frac{\nu - \beta}{\beta - \nu} + \frac{\delta - \gamma}{\gamma - \delta} + \frac{\varepsilon - \delta}{\delta - \varepsilon} + \dots + \frac{\nu - \gamma}{\gamma - \nu} + \dots + \\
 &+ \frac{\nu - \mu}{\mu - \nu} = -(a_1 + b_1 + c_1 + \dots + m_1 + n_1)
 \end{aligned}$$

et finalement

$$\begin{aligned}
 & N_{(a, b, c, \dots, m, n)} [A \geq B \geq C \geq \dots \geq M \geq N] = (a + b + c + \dots + m + n) \Phi \\
 &= [(\alpha - \beta)(\alpha - \gamma)(\alpha - \delta) \dots (\alpha - \nu)(\beta - \gamma)(\beta - \delta) \dots \\
 &\quad \dots (\beta - \nu)(\gamma - \delta)(\gamma - \varepsilon) \dots (\gamma - \nu) \dots \\
 &\quad \dots (\mu - \nu)] \frac{(a + b + c + \dots + m + n)!}{\alpha! \beta! \gamma! \dots \mu! \nu!} \\
 &= \left(\frac{a+1-b}{a+1} \right) \left(\frac{a+2-c}{a+2} \right) \dots \left(\frac{a+(n_1-1)-n}{a+(n_1-1)} \right) \\
 &\left(\frac{b+1-c}{b+1} \right) \left(\frac{b+2-d}{b+2} \right) \dots \left(\frac{b+(n_1-2)-n}{b+(n_1-2)} \right) \left(\frac{c+1-d}{c+1} \right) \\
 &\left(\frac{c+2-d}{c+2} \right) \dots \left(\frac{c+(n_1-c_1)-n}{c+(n_1-c_1)} \right) \dots \left(\frac{m+1-n}{m+1} \right) \\
 &\quad \frac{(a+b+c+\dots+m+n)!}{a! b! c! \dots m! n!}
 \end{aligned}$$

THEOREME. Si $a \geq b - 1 \geq c - 2 \geq \dots \geq m - m_1 \geq n - n_1$

$$\begin{aligned}
 & P_{(a, b, c, \dots, m, n)} [A \geq B \geq C \geq \dots \geq M \geq N] = \\
 &= \frac{a+1-b}{a+1} \cdot \frac{a+2-c}{a+2} \cdot \dots \cdot \frac{a+(n_1-1)-n}{a+(n_1-1)} \cdot \frac{b+1-c}{b+1} \\
 &\frac{b+2-d}{b+2} \cdot \dots \cdot \frac{b+(n_1-2)-n}{b+(n_1-2)} \cdot \frac{c+1-d}{c+1} \cdot \frac{c+2-e}{c+2} \dots \\
 &\quad \frac{c+(n_1-c_1)-n}{c+(n_1-c_1)} \cdot \dots \cdot \frac{m+1-n}{m+1}
 \end{aligned}$$

(Continua)

MOVIMENTO CIENTIFICO

CENTENÁRIO DE GOMES TEIXEIRA

Em sessão de 20 de Maio de 1948 o Senado Universitário do Porto, partilhando a iniciativa do Conselho da Faculdade de Ciências, resolveu promover, em Maio de 1951, a comemoração do 1.º centenário do nascimento do Prof. Dr. Gomes Teixeira, que foi o 1.º

Reitor e Reitor honorário da Universidade do Porto.

Em sessão solene serão evocadas, pelo Prof. R. Sarmiento de Beires, a vida e a obra do grande Matemático, procedendo-se em seguida ao descerramento do seu retrato, pintado por Abel de Moura, na Galeria dos Reitores, e do busto de mármore, por Teixeira Lopes, na sala do Conselho da Faculdade de Ciências.

