Ejercicio pendiente:

$$\frac{1}{6};\frac{1}{4};\frac{3}{10};\frac{1}{3};…..$$

$$\frac{1}{6};\frac{1}{4};\frac{3}{10};\frac{1}{3};\frac{5}{14}…..$$

a$a6=\frac{1}{6+1}-\frac{1}{6+2})+5/14=3/8$

$$a7=\frac{1}{8}-\frac{1}{9})+5/14= 7/18$$

$$\frac{1}{6};\frac{1}{4};\frac{3}{10};\frac{1}{3};\frac{5}{14};\frac{3}{8};\frac{7}{18}…..$$

$$\frac{1}{6};0.25;0.3;0.3333333; $$

0.416

$$\frac{n+2-n-1}{(n+1)(n+2)}=\frac{1}{(n^{2}+3n+2)}$$

Taller 7:

Ejercicio 4 c):

1-2=-1 “termino siguiente”

1-3=-2 “Termino anterior”

$$\sum\_{K=4}^{n}\left(\frac{5-2k}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)=\sum\_{K=4}^{n}\left(\frac{6-1-2k}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)=\sum\_{K=4}^{n}\left(\frac{-2\left(k-3\right)-1}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)$$

$$=\sum\_{K=4}^{n}\left(\frac{-2\left(k-3\right)}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)-\sum\_{K=4}^{n}\left(\frac{1}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)$$

$$=\sum\_{K=4}^{n}\left(\frac{-2}{\left(k-2\right)^{2}\left(k-3\right)^{1}}\right)-\sum\_{K=4}^{n}\left(\frac{1}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)$$

$$\frac{5-2k}{\left(k-2\right)^{2}\left(k-3\right)^{2}}=\frac{5-2k}{(k^{2}-4k+4)(k^{2}-6k+9)}=\frac{Ak+B}{(k^{2}-4k+4)}+\frac{Ck+D}{(k^{2}-6k+9)}$$

$$=\frac{\left(Ak+B\right)\left(k^{2}-6k+9\right)+(Ck+D)(k^{2}-4k+4)}{(k^{2}-4k+4)(k^{2}-6k+9)}$$

$$=\frac{\left(AK^{3}-6Ak^{2}+9Ak+Bk^{2}-6Bk+9B\right)+(CK^{3}-4Ck^{2}+4Ck+Dk^{2}-4Dk+4D)}{(k^{2}-4k+4)(k^{2}-6k+9)}$$

$$=\frac{\left(K^{3}(A+C)-k^{2}(6A-B+4C-D\right)+k\left(9A-6B+4C-4D\right)+9B+4D}{(k^{2}-4k+4)(k^{2}-6k+9)}$$

$$A+C=0 (1)$$

$$6A-B+4C-D=0 (2)$$

$$9A-6B+4C-4D=-2 (3)$$

$$9B+4D=5 (4)$$

A=0

B=1

C=0

D=-1

$$\sum\_{K=4}^{n}\left(\frac{5-2k}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)= \frac{0\*k+1}{(k^{2}-4k+4)}+\frac{0\*k-1}{(k^{2}-6k+9)}$$

$$=\frac{1}{(k^{2}-4k+4)}+\frac{-1}{(k^{2}-6k+9)}$$

$$\sum\_{K=4}^{n}\left(\frac{5-2k}{\left(k-2\right)^{2}\left(k-3\right)^{2}}\right)=\sum\_{K=4}^{n}( \frac{1}{\left(k-2\right)^{2}}+\frac{-1}{\left(k-3\right)^{2}}) $$

$$=\sum\_{K=1}^{n}\left(\frac{1}{\left(k-2\right)^{2}}-\frac{1}{\left(k-3\right)^{2}}\right)-\sum\_{K=1}^{4-1}\left(\frac{1}{\left(k-2\right)^{2}}-\frac{1}{\left(k-3\right)^{2}}\right)$$

$$\left(\frac{1}{\left(n-2\right)^{2}}-\frac{1}{\left(1-3\right)^{2}}\right)-\left(\frac{1}{\left(3-2\right)^{2}}-\frac{1}{\left(1-3\right)^{2}}\right)=\frac{1}{\left(n-2\right)^{2}}-\frac{1}{4}-\frac{1}{1}+\frac{1}{4} $$

$$=\frac{1}{\left(n-2\right)^{2}}-1$$

$$=\frac{1-\left(n-2\right)^{2}}{\left(n-2\right)^{2}} $$

stweart precálculo

http://ftp1.unimeta.edu.co/calculus/multivariable/books/precalculo\_-\_matematicas\_para\_el\_calculo-1.pdf