Mathématiques

Composition de Mathématiques n°2

Appréciations :

Note :

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Signature :

Problème 2 :

Partie A : Monotonie

a)

Un=2n-n

Je calcule Un+1:

Un+1=2n+1-n+1

Un+1=2(2-n)+1-(2n-n)+1

Un+1=4n-2n+2-2n+n+1

La suite Un+1 est égale à 2n-n+3.

Je calcule la monotonie :

Un+1-Un=2n-n+3-(2n-n)

Un+1-Un=2n-2n-n+n+3

La suite à une monotonie qui est égale à 3.

b)

Vn=

Je calcule Vn+1:

Vn+1=

Vn+1=

Vn+1=

Vn+1-Vn=-

Vn+1-Vn=-

Je n’ai pas réussi à résoudre cette équation.

c)

Partie B : Suites Arithmétiques et géométriques

a)

Calculer une somme S

a)

b) S=590490+587700+584910+…+10170

Je soustrais 587700 à 584910 :

587700-584910=2790

J’ajoute 2790 à 587700 pour vérifier le calcule :

587700+2790=590490

On a donc une suite arithmétique de raison r=2790.

La formule est donc Un+1=Un+2790

Je détermine U0, pour cela je soustrais 2790 à 10170 jusqu’à arriver au plus proche de 0:

10170-2790=7380

7380-2790=4590

4590-2790=1800

U0 est donc égal à 1800.

Je calcule les termes de la suite :

|  |  |  |  |
| --- | --- | --- | --- |
| U0=1800+2790=4590  U1=4590+2790=7380  U2=7380+2790=10170  U3=10170+2790=12960  U4=12960+2790=15750  U5=15750+2790=18540  U6=18540+2790=21330  U7=21330+2790=24120  U8=24120+2790=26910  U9=26910+2790=29700  U10=29700+2790=32490  U11=32490+2790=35280  U12=35280+2790=38070  U13=38070+2790=40860  U14=40860+2790=43650  U15=43650+2790=46440  U16=46440+2790=49230  U17=49230+2790=52020  U18=52020+2790=54810  U19=54810+2790=57600  U20=57600+2790=60390  U21=60390+2790=63180  U22=63180+2790=65970  U23=65970+2790=68760  U24=68760+2790=71550  U25=71550+2790=74340  U26=74340+2790=77130  U27=77130+2790=79920  U28=79920+2790=82710  U29=82710+2790=85500  U30=85500+2790=88290  U31=88290+2790=91080  U32=91080+2790=93870  U33=93870+2790=96660  U34=96660+2790=99450  U35=99450+2790=102240  U36=102240+2790=105030  U37=105030+2790=107820  U38=107820+2790=110610  U39=110610+2790=113400  U40=113400+2790=116190  U41=116190+2790=118980  U42=118980+2790=121770  U43=121770+2790=124560  U44=124560+2790=127350  U45=127350+2790=130140  U46=130140+2790=132930  U47=132930+2790=135720  U48=135720+2790=138510  U49=138510+2790=141300  U50=141300+2790=144090  U51=144090+2790=146880 | U52=146880+2790=149670  U53=149670+2790=152460  U54=152460+2790=155250  U55=155250+2790=158040  U56=158040+2790=160830  U57=160830+2790=163620  U58=163620+2790=166410  U59=166410+2790=169200  U60=169200+2790=171990  U61=171990+2790=174780  U62=174780+2790=177570  U63=177570+2790=180360  U64=180360+2790=183150  U65=183150+2790=185940  U66=185940+2790=188730  U67=188730+2790=191520  U68=191520+2790=194310  U69=194310+2790=197100  U70=197100+2790=199890  U71=199890+2790=202680  U72=202680+2790=205470  U73=205470+2790=208260  U74=208260+2790=211050  U75=211050+2790=213840  U76=213840+2790=216630  U77=216630+2790=219420  U78=219420+2790=222210  U79=222210+2790=225000  U80=225000+2790=227790  U81=227790+2790=230580  U82=230580+2790=233370  U83=233370+2790=236160  U84=236160+2790=238950  U85=238950+2790=241740  U86=241740+2790=244530  U87=244530+2790=247320  U88=247320+2790=250110  U89=250110+2790=252900  U90=252900+2790=255690  U91=255690+2790=258480  U92=258480+2790=261270  U93=261270+2790=264060  U94=264060+2790=266850  U95=266850+2790=269640  U96=269640+2790=272430  U97=272430+2790=275220  U98=275220+2790=278010  U99=278010+2790=280800  U100=280800+2790=283590  U101=283590+2790=286380  U102=286380+2790=289170  U103=289170+2790=291960 | U104=291960+2790=294750  U105=294750+2790=297540  U106=297540+2790=300330  U107=300330+2790=303120  U108=303120+2790=305910  U109=305910+2790=308700  U110=308700+2790=311490  U111=311490+2790=314280  U112=314280+2790=317070  U113=317070+2790=319860  U114=319860+2790=322650  U115=322650+2790=325440  U116=325440+2790=328230  U117=328230+2790=331020  U118=331020+2790=333810  U119=333810+2790=336600  U120=336600+2790=339390  U121=339390+2790=342180  U122=342180+2790=344970  U123=344970+2790=347760  U124=347760+2790=350550  U125=350550+2790=353340  U126=353340+2790=356130  U127=356130+2790=358920  U128=358920+2790=361710  U129=361710+2790=364500  U130=364500+2790=367290  U131=367290+2790=370080  U132=370080+2790=372870  U133=372870+2790=375660  U134=375660+2790=378450  U135=378450+2790=381240  U136=381240+2790=384030  U137=384030+2790=386820  U138=386820+2790=389610  U139=389610+2790=392400  U140=392400+2790=395190  U141=395190+2790=397980  U142=397980+2790=400770  U143=400770+2790=403560  U144=403560+2790=406350  U145=406350+2790=409140  U146=409140+2790=411930  U147=411930+2790=414720  U148=414720+2790=417510  U149=417510+2790=420300  U150=420300+2790=423090  U151=423090+2790=425880  U152=425880+2790=428670  U153=428670+2790=431460  U154=431460+2790=434250 | U155=434250+2790=437040  U156=437040+2790=439830  U157=439830+2790=442620  U158=442620+2790=445410  U159=445410+2790=448200  U160=448200+2790=450990  U161=450990+2790=453780  U162=453780+2790=456570  U163=456570+2790=459360  U164=459360+2790=462150  U165=462150+2790=464940  U166=464940+2790=467730  U167=467730+2790=470520  U168=470520+2790=473310  U169=473310+2790=476100  U170=476100+2790=478890  U171=478890+2790=481680  U172=481680+2790=484470  U173=484470+2790=487260  U174=487260+2790=490050  U175=490050+2790=492840  U176=492840+2790=495630  U177=495630+2790=498420  U178=498420+2790=501210  U179=501210+2790=504000  U180=504000+2790=506790  U181=506790+2790=509580  U182=509580+2790=512370  U183=512370+2790=515160  U184=515160+2790=517950  U185=517950+2790=520740  U186=520740+2790=523530  U187=523530+2790=526320  U188=526320+2790=529110  U189=529110+2790=531900  U190=531900+2790=534690  U191=534690+2790=537480  U192=537480+2790=540270  U193=540270+2790=543060  U194=543060+2790=545850  U195=545850+2790=548640  U196=548640+2790=551430  U197=551430+2790=554220  U198=554220+2790=557010  U199=557010+2790=559800  U200=559800+2790=562590  U201=562590+2790=565380  U202=565380+2790=568170  U203=568170+2790=570960  U204=570960+2790=573750  U205=573750+2790=576540  U206=576540+2790=579330  U207=579330+2790=582120  U208=582120+2790=584910  U209=584910+2790=587700  U210=587700+2790=590490  U211=590490+2790=593280 |