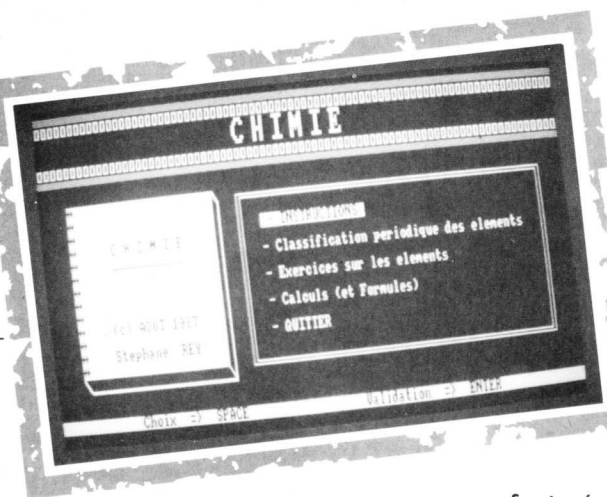


# CHIMIE



Valable pour  
 CPC 464  
 CPC 664  
 CPC 6128

S t é p h a n e . R E Y

Ce programme n'est pas une initiation à la chimie ; il sera utilisé par les pratiquants pour suppléer à votre mémoire défaillante. La table des éléments périodes et sa composition latine, les moles et le nombre d'Avogadro se rappelleront à votre souvenir. Bon courage tout de même...

```

10 *****
20 CHIMIE
30
40 - 21 Ko -
50 (c) ADUT 1987
60 REY St.
70 *****
80 ON BREAK GOSUB 5400
90 MODE 2:RESTORE 570:BORDER 4:INK 0,1:INK 1,16:PAPER 0
:PEN 1
100 WINDOW #1,5,26,8,20:PAPER #1,1:PEN #1,0:CLS#1
110 *****
120 SYMBOL AFTER 175
130 SYMBOL 175,15,15,60,60,240,240,240
140 SYMBOL 176,240,240,60,60,0,0,0,0
150 SYMBOL 177,240,240,60,60,15,15,0,0
    
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160 SYMBOL 178,0,0,60,60,240,240,0,0 >BM
170 SYMBOL 179,60,60,60,60,60,60,63,63 >DQ
180 SYMBOL 180,60,60,60,60,60,252,252 >FF
190 SYMBOL 181,60,60,60,60,60,60,0,0 >BX
200 SYMBOL 182,63,63,3,3,3,3,3 >YG
210 SYMBOL 183,252,252,192,192,192,192,192 >ML
220 SYMBOL 184,3,3,3,63,63,0,0 >YE
230 SYMBOL 185,192,192,192,252,252,0,0 >HX
240 SYMBOL 186,240,240,252,252,255,255,255 >ME
250 SYMBOL 187,60,60,252,252,252,252,252 >KH
260 SYMBOL 188,243,243,240,240,240,0,0 >HC
270 SYMBOL 189,255,255,60,60,60,63,63 >FD
280 SYMBOL 190,252,252,12,12,192,192,192 >DL
290 SYMBOL 191,60,60,60,60,255,255,0,0 >KF
300 SYMBOL 192,192,192,12,12,252,252,0,0 >FW
310 SYMBOL 245,0,0,4,6,6,6,6 >WB
320 SYMBOL 246,0,0,6,24,48,32,64,64 >BR
330 SYMBOL 247,7,5,5,109,136,144,96,0 >CB
340 SYMBOL 248,64,64,64,192,192,128,128,0 >GW
350 CC#=CHR$(175)+CHR$(176)+CHR$(18)+CHR$(8)+CHR$(10)+CH >VF
R$(177)+CHR$(178)
360 HH#=CHR$(179)+CHR$(180)+CHR$(8)+CHR$(8)+CHR$(10)+CH >VE
R$(181)+CHR$(181)
370 II#=CHR$(182)+CHR$(183)+CHR$(8)+CHR$(8)+CHR$(10)+CH >VM
R$(184)+CHR$(185)
    
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380 M#=#CHR$(186)+CHR$(187)+CHR$(8)+CHR$(8)+CHR$(10)+CH >VF
R$(188)+CHR$(181)
390 EE=#CHR$(189)+CHR$(190)+CHR$(8)+CHR$(8)+CHR$(10)+CH >WZ
R$(191)+CHR$(192)
400 N#=#CHR$(245)+CHR$(246)+CHR$(8)+CHR$(8)+CHR$(10)+CH >VR
R$(247)+CHR$(248)
410 LOCATE 31,3:PRINT CC#:LOCATE 34,3:PRINT HH#:LOCATE >CB
37,3:PRINT II#:LOCATE 40,3:PRINT MM#:LOCATE 43,3:PRINT
II#:LOCATE 46,3:PRINT EE#
420 LOCATE 1,1:PRINT STRING$(80,CHR$(216)) >KD
430 LOCATE 1,2:PRINT STRING$(80,CHR$(232)) >KN
440 LOCATE 1,6:PRINT STRING$(80,CHR$(216)) >KW
450 LOCATE 1,5:PRINT STRING$(80,CHR$(232)) >KU
460 LOCATE #1,7,4:PRINT#1,"C H I M I E" >FM
470 LOCATE #1,7,5:PRINT#1,"" >LP
480 LOCATE #1,6,10:PRINT#1,"(c) ADUT 1987" >KK
490 LOCATE #1,6,12:PRINT#1,"Stephane REY" >NX
500 LOCATE #1,1,1:FOR I=1 TO 13:PRINT#1,CHR$(255):NEXT >YV
510 LOCATE 27,8:PRINT CHR$(205):LOCATE 27,9:PRINT CHR$( >EN
209)
520 ORIGIN 215,65:DRAW 0,200:ORIGIN 214,65:DRAW 0,200 >WJ
530 LOCATE 5,21:PRINT CHR$(205):ORIGIN 38,65:DRAW 175,0 >EP
:ORIGIN 40,63:DRAW 175,0
540 ORIGIN 215,62:DRAW -12,25:ORIGIN 215,64:DRAW -12,25 >YX
550 *** MENU DESCENDANT *** >TA
560 GOSUB 950 >JE
570 DATA "- INSTRUCTIONS",- Classification periodique >UB
580 DATA "- Exercices sur les elements"
590 DATA "- Calculs (et Formules) ", "- QUITTER " >YH
590 FOR I=1 TO 5:READ X$(I):NEXT:I=#1 >DH
600 PEN 1:LOCATE 1,24:PRINT CHR$(24); " Choix >NF
=> SPACE Validation => ENTER
":CHR$(24)
610 FOR I=1 TO 5:LOCATE 34,8+I*2:PRINT X$(I):NEXT >TA
620 LOCATE 34,8+I*2:PRINT CHR$(24); " ;X$(H); " ;CHR$(2 >AT
4)
630 R#=#:WHILE R#=#:R#=#INKEY$:WEND >EZ
640 GOSUB 1170 >QA
650 IF R#=#CHR$(13) THEN 690 >UB
660 V=#H:#H#1:IF H=# THEN H=1 >WB
670 LOCATE 34,8+V*2:PRINT " ;X$(V); " >FB
680 GOTO 620 >ZJ
690 ON H GOTO 710,2250,2770,4180,3080 >CR
700 ***** INSTRUCTIONS ***** >RH
710 CLS:H#=#** INSTRUCTIONS **I=Y#3:M=80:GOSUB 4110:GOS >ZB
UB 1100:GOSUB 1000
720 LOCATE 13,7:PRINT " Vous avez du mal a assimiler le >BP
s caracteristiques de"
730 GOSUB 1150:LOCATE 13,8:PRINT"certains elements chim >MP
iques ? Vous souhaitez connaitre"
740 GOSUB 1150:LOCATE 13,9:PRINT"le nombre de moles con >RG
tenues dans un corps ou meme le"
750 GOSUB 1150:LOCATE 13,10:PRINT"volume d'un gaz et d' >KL
autres encore ? Alors CHIMIE "
760 GOSUB 1150:LOCATE 13,11:PRINT"pourra peut etre vous >UR
aidez a resoudre ses problemes."
770 GOSUB 1150:LOCATE 13,13:PRINT" Regroupant 6 formaul >PA

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es de calculs, ainsi que les 103"
780 GOSUB 1150:LOCATE 13,14:PRINT"elements de la classi >TV
fication periodique ( et leurs "
790 GOSUB 1150:LOCATE 13,15:PRINT"caracteristiques ), C >RR
HIMIE vous aidera a resoudre des"
800 GOSUB 1150:LOCATE 13,16:PRINT"exercices a l'aide >QW
des formules comprises dans le"
810 GOSUB 1150:LOCATE 13,17:PRINT"programme et a revise >QF
r ou meme a apprendre les ele-"
820 GOSUB 1150:LOCATE 13,18:PRINT"ments chimiques grace >TZ
a de petits exercices compris"
830 GOSUB 1150:LOCATE 13,19:PRINT"eux aussi dans ce pro >YR
gramme ."
840 GOSUB 1150:LOCATE 21,21:PRINT" Encore BONNE CHANCE >FE
ET BON TRAVAIL !!!"
850 LOCATE 1,24:PRINT CHR$(24); " >EG
<<<< TAPER UNE TOUCHE >>>>
":CHR$(24):CALL &B80:RESTORE 570:GOSUB 1170:GOTO 90
860 ***** liste des elements ***** >TE
870 WHILE INKEY$<>"":WEND >VU
880 RESTORE 1200 >LA
890 RESTORE 1200:CLS:MODE 1:FOR N=1 TO 103:READ A#,B#,C >BT
$,D#,E#:CLS:GOSUB 1100
900 H#=# " CHIMIE *":Y#3:M=40:GOSUB 4110:GOSUB 1050:LOCA >ZY
TE 7,8:PRINT " Nom : ";A#:LOCATE 7,10:PRINT " Symbo
le : ";B#
910 LOCATE 7,12:PRINT " No atom. : ";C#:LOCATE 7,14:FR >BM
INT" Poids atom. : ";D#:LOCATE 7,16:PRINT " Famille
: ";E#
920 LOCATE 1,23:PRINT CHR$(24); " <COPY> => MENU <E >YK
SPACE => SUITE " ;CHR$(24):IF INKEY$(24)=-1 THEN GOTO 2
250 ELSE CALL &B81:NEXT
930 RUN 2270 >YA
940 ***** cadres ***** >TD
950 ORIGIN 0,0:MOVE 237,78:DRAW 237,280:DRAW 610,280 >VA
960 DRAW 610,78:DRAW 237,78 >UP
970 MOVE 241,82:DRAW 241,276:DRAW 606,276 >GG
980 DRAW 606,82:DRAW 241,82 >UF
990 RETURN >AD
1000 ORIGIN 0,0:MOVE 65,52:DRAW 65,320:DRAW 558,320 >TH
1010 DRAW 558,52:DRAW 65,52 >UQ
1020 MOVE 69,56:DRAW 69,316:DRAW 554,316 >UG
1030 DRAW 554,56:DRAW 69,56 >UB
1040 RETURN >EJ
1050 ORIGIN 0,0:MOVE 40,135:DRAW 40,300:DRAW 610,300 >UG
1060 DRAW 610,135:DRAW 40,135 >WD
1070 MOVE 44,139:DRAW 44,296:DRAW 606,296 >GE
1080 DRAW 606,139:DRAW 44,139 >WZ
1090 RETURN >FD
1100 ORIGIN 0,0:MOVE 0,0:DRAW 0,398:DRAW 639,398 >QN
1110 DRAW 639,0:DRAW 0,0 >RR
1120 MOVE 4,4:DRAW 4,394:DRAW 635,394 >DK
1130 DRAW 635,4:DRAW 4,4 >RC
1140 RETURN >EK
1150 ***** >YK
1160 FOR T=1 TO 1000:NEXT:RETURN >AN
1170 ***** son ***** >YB

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1180 SOUND 1,180,18,10: SOUND 1,250,16,10: RETURN  
 1190 \*\*\*\*\* DATAS \*\*\*\*\*  
 1200 DATA ACTINIUM,Ac,89,227,ACTINIDES  
 1210 DATA ALUMINIUM,Al,13,27,METALX  
 1220 DATA AMERICIUM,Am,95,243,ACTINIDES  
 1230 DATA ANTIMONE,Sb,51,121,8,METALX  
 1240 DATA ARGENT,Ag,47,107,9,METALX  
 1250 DATA ARGON,Ar,18,39,9,GAZ  
 1260 DATA ARSENIC,As,33,74,9,METALLOIDES  
 1270 DATA ASTATE,At,85,210,METALLOIDES  
 1280 DATA AZOTE,N,7,14,METALLOIDES  
 1290 DATA BARIUM,Ba,56,137,3,METALX  
 1300 DATA BERKELIUM,Bk,97,249,ACTINIDES  
 1310 DATA BERYLLIUM,Be,4,9,METALX  
 1320 DATA BISMUTH,Bi,83,209,METALX  
 1330 DATA BORE,B,5,10,8,METALLOIDES  
 1340 DATA BROME,Br,35,79,9,METALLOIDES  
 1350 DATA CADMIUM,Cd,48,112,4,METALX  
 1360 DATA CAESIUM,Cs,55,132,9,METALX  
 1370 DATA CALCIUM,Ca,20,40,1,METALX  
 1380 DATA CALIFORNIUM,Cf,98,251,ACTINIDES  
 1390 DATA CARBONE,C,6,12,METALLOIDES  
 1400 DATA CERIUM,Ce,58,140,1,LANTHANIDES  
 1410 DATA CHLORE,Cl,17,35,5,METALLOIDES  
 1420 DATA CHROME,Cr,24,52,METALX  
 1430 DATA COBALT,Co,27,58,9,METALX  
 1440 DATA CUIVRE,Cu,29,63,5,METALX  
 1450 DATA CURIUM,Cm,96,247,ACTINIDES  
 1460 DATA DYSPROSIUM,Dy,66,162,5,LANTHANIDES  
 1470 DATA EINSTEINIUM,Es,99,254,ACTINIDES  
 1480 DATA ERBIUM,Er,68,167,3,LANTHANIDES  
 1490 DATA ETAIN,Sn,50,118,7,METALX  
 1500 DATA EUROPIUM,Eu,63,152,LANTHANIDES  
 1510 DATA FER,Fe,26,55,8,METALX  
 1520 DATA FERMIUM,Fm,100,255,ACTINIDES  
 1530 DATA FLUOR,F,9,19,METALLOIDES  
 1540 DATA FRANCIUM,Fr,87,223,METALX  
 1550 DATA GADOLINIUM,Gd,64,157,3,LANTHANIDES  
 1560 DATA GALLIUM,Ga,31,69,7,METALX  
 1570 DATA GERMANIUM,Ge,32,72,6,METALX  
 1580 DATA HAFNIUM,Hf,72,178,5,METALX  
 1590 DATA HELIUM,He,2,4,GAZ  
 1600 DATA HOLMIUM,Ho,67,164,9,LANTHANIDES  
 1610 DATA HYDROGENE,H,1,1,GAZ  
 1620 DATA INDIUM,In,49,114,8,METALX  
 1630 DATA IODE,I,53,126,9,METALLOIDES  
 1640 DATA IRIDIUM,Ir,77,192,2,METALX  
 1650 DATA KRYPTON,Kr,36,83,8,GAZ  
 1660 DATA LANTHANUM,La,57,138,9,LANTHANIDES  
 1670 DATA LAWRENCIUM,Ln,103,257,ACTINIDES  
 1680 DATA LITHIUM,Li,3,6,9,METALX  
 1690 DATA LUTETIUM,Lu,71,175,LANTHANIDES  
 1700 DATA MAGNESIUM,Mg,12,24,3,METALX  
 1710 DATA MANGANESE,Mn,25,54,9,METALX  
 1720 DATA MENDELEVIUM,Md,101,256,ACTINIDES  
 1730 DATA MERCURE,Hg,80,200,6,METALX  
 1740 DATA MOLYBDENE,Mo,42,95,9,METALX

1750 DATA NEODYME,Nd,60,144,2,LANTHANIDES  
 1760 DATA NEON,Ne,10,20,2,GAZ  
 1770 DATA NEPTUNIUM,Np,93,237,ACTINIDES  
 1780 DATA NICKEL,Ni,28,58,7,METALX  
 1790 DATA NIOBIUM,Nb,41,92,9,METALX  
 1800 DATA NOBELIUM,Nb,102,253,ACTINIDES  
 1810 DATA OR,Au,79,197,METALX  
 1820 DATA OSMIUM,Os,76,190,2,METALX  
 1830 DATA OXYGENE,O,8,16,METALLOIDES  
 1840 DATA PALLADIUM,Pd,46,106,4,METALX  
 1850 DATA PHOSPHORE,P,15,31,METALLOIDES  
 1860 DATA PLATINE,Pt,78,195,1,METALX  
 1870 DATA PLOMB,Pb,82,207,2,METALX  
 1880 DATA PLUTONIUM,Pu,94,242,ACTINIDES  
 1890 DATA POLONIUM,Po,84,209,METALX  
 1900 DATA POTASSIUM,K,19,39,1,METALX  
 1910 DATA PRASEODYME,Pr,59,140,9,LANTHANIDES  
 1920 DATA PROMETHIUM,Pm,61,145,LANTHANIDES  
 1930 DATA PROCTACTINIUM,Pa,91,231,ACTINIDES  
 1940 DATA RADIUM,Ra,88,226,1,METALX  
 1950 DATA RADON,Rn,86,222,GAZ  
 1960 DATA RHENIUM,Rh,75,186,2,METALX  
 1970 DATA RHODIUM,Rh,45,102,9,METALX  
 1980 DATA RUBIDIUM,Rb,37,85,5,METALX  
 1990 DATA RUTHENIUM,Ru,44,101,1,METALX  
 2000 DATA SAMARIUM,Sm,62,150,4,LANTHANIDES  
 2010 DATA SCANDIUM,Sc,21,45,METALX  
 2020 DATA SELENIUM,Se,34,79,METALLOIDES  
 2030 DATA SILICIUM,Si,14,28,1,METALLOIDES  
 2040 DATA SODIUM,Na,11,23,METALX  
 2050 DATA STRONTIUM,Sr,38,87,6,METALX  
 2060 DATA SOUFRE,S,16,32,1,METALLOIDES  
 2070 DATA TANTALE,Ta,73,180,9,METALX  
 2080 DATA TECHNETIUM,Tc,43,99,METALX  
 2090 DATA TELLURIUM,Te,52,127,6,METALLOIDES  
 2100 DATA TERBIUM,Tb,65,158,9,LANTHANIDES  
 2110 DATA THALLIUM,Tl,81,204,4,METALX  
 2120 DATA THORIUM,Th,90,232,ACTINIDES  
 2130 DATA THULIUM,Tm,69,168,9,LANTHANIDES  
 2140 DATA TITANE,Ti,22,47,9,METALX  
 2150 DATA TUNGSTENE,W,74,183,9,METALX  
 2160 DATA URANIUM,U,92,238,ACTINIDES  
 2170 DATA VANADIUM,V,23,50,9,METALX  
 2180 DATA XENON,Xe,54,131,3,GAZ  
 2190 DATA YTTERBIUM,Yb,70,173,LANTHANIDES  
 2200 DATA YTTRIUM,Y,39,88,9,METALX  
 2210 DATA ZINC,Zn,30,65,4,METALX  
 2220 DATA ZIRCONIUM,Zr,40,91,2,METALX  
 2230 END  
 2240 \*\*\*\*\*  
 2250 \*\*\*\* CLASSIFICATION (MENU) \*\*\*\*  
 2260 WHILE !KEY\$@")":WEND  
 2270 MODE 1:CLS:GOSUB 1100:H\$="\* CLASSIFICATION PERIODI  
 QUE \*":Y=3:M=40:GOSUB 4110  
 2280 H\$="\* DES ELEMENTS \*":Y=5:M=40:GOSUB 4110  
 2290 LOCATE 6,9:PRINT"A- Liste des elements."  
 2300 LOCATE 6,11:PRINT"B- Resterche par le NOM."



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2310 LOCATE 6,13:PRINT"C- Recherche par le Symbole." >FF
2320 LOCATE 6,15:PRINT"D- Recherche par le No atomique." >MK
"
2330 LOCATE 6,17:PRINT"E- Retour au menu." >GH
2340 LOCATE 1,23:PRINT CHR$(24); " <<< Taper votre >GQ
choix >>> " ;CHR$(24)
2350 Z$=INKEY$ >YK
2360 IF Z$="A" OR Z$="a" THEN GOSUB 1170:GOTO 860 >FR
2370 IF Z$="B" OR Z$="b" THEN GOSUB 1170:GOTO 2420 >QL
2380 IF Z$="C" OR Z$="c" THEN GOSUB 1170:GOTO 2540 >QT
2390 IF Z$="D" OR Z$="d" THEN GOSUB 1170:GOTO 2640 >QX
2400 IF Z$="E" OR Z$="e" THEN GOSUB 1170:GOTO 90 >NT
2410 GOTO 2350 >ME
2420 **** recherche par le NOM **** >YA
2430 WHILE INKEY$("<");WEND >VQ
2440 RESTORE 1200:MODE 1:CLS:GOSUB 1100: H$="** Recherch >YM
e par NOM *":Y=3:M=40:GOSUB 4110
2450 LOCATE 7,8:INPUT"Nom de l'element : ",R$ >UV
2460 R$=UPPER$(R$):FOR R=1 TO 103:READ A$,B$,C$,D$,E$ >VA
2470 IF R$=A$ THEN 2480 ELSE 2490 >YD
2480 GOSUB 2730:GOTO 2510 >TH
2490 NEXT >LG
2500 GOSUB 2530 >MK
2510 LOCATE 1,23:PRINT CHR$(24); " <<< TAPER UNE >KG
TOUCHE >>> " ;CHR$(24)
2520 CALL @BBO6:GOSUB 1170:GOTO 2250 >CA
2530 H$="DESOLE, MAIS NON REPETROIRE...":Y=17:M=40:GOSU >YJ
B 4110:FOR H=1 TO 500:NEXT:RETURN
2540 **** recherche par le SYMBOLE **** >YD
2550 WHILE INKEY$("<");WEND >VU
2560 RESTORE 1200:MODE 1:CLS:GOSUB 1100:H$="** Recherche >GT
par Symbole *":Y=3:M=40:GOSUB 4110
2570 LOCATE 5,8:INPUT"Symbole de l'element : ",R$ >BG
2580 FOR R=1 TO 103:READ A$,B$,C$,D$,E$ >DU
2590 IF R$=B$ THEN 2600 ELSE 2610 >XD
2600 GOSUB 2730:GOTO 2630 >TE
2610 NEXT >LA
2620 GOSUB 2530 >XC
2630 GOTO 2510 >MG
2640 **** recherche par le No ATOMIQUE **** >YE
2650 RESTORE 1200:MODE 1:CLS:GOSUB 1100:H$="** Recherch >MJ
e par No ATOMIQUE *":Y=3:M=40:GOSUB 4110
2660 LOCATE 5,8:INPUT"No ATOMIQUE de l'element : ",R$ >ER
2670 R$=UPPER$(R$):FOR R=1 TO 103:READ A$,B$,C$,D$,E$ >VD
2680 IF R$=C$ THEN 2690 ELSE 2700 >YF
2690 GOSUB 2730:GOTO 2720 >TP
2700 NEXT >LA
2710 GOSUB 2530 >XC
2720 GOTO 2510 >MG
2730 * <***** >>> >YE
2740 CLS:MODE 1:GOSUB 1100:H$="** CHIMIE *":Y=3:M=40:GOS >RD
UB 4110:GOSUB 1050:LOCATE 7,8:PRINT" NOM : ";A$:LOCAT
E 7,10:PRINT" SYMBOLE : ";B$
2750 LOCATE 7,12:PRINT" No atom. : ";C$:LOCATE 7,14:P >DZ
RINT" Poids atom. : ";D$:LOCATE 7,16:PRINT" Famille
: ";E$
2760 RETURN >FJ
2770 * <***** >>> >YJ
2780 EXERCICES SUR LES ELEMENTS >YK
2790 * <***** >>> >ZA
2800 MODE 1:CLS:GOSUB 1100:H$="Exercices sur les elemen >RG
ts":Y=4:M=40:GOSUB 4110
2810 LOCATE 6,8:PRINT"A- Trouver le NOM." >PV
2820 LOCATE 6,10:PRINT"B- Trouver le SYMBOLE." >VU
2830 LOCATE 6,12:PRINT"C- Trouver le No ATOMIQUE." >AL
2840 LOCATE 6,14:PRINT"D- Trouver le POIDS ATOMIQUE." >EL
2850 LOCATE 6,16:PRINT"E- Trouver la FAMILLE." >QT
2860 LOCATE 6,18:PRINT"F- Retour au MENU" >NE
2870 LOCATE 1,23:PRINT CHR$(24); " <<< Taper votr >QZ
e choix >>> " ;CHR$(24)
2880 Z$=INKEY$ >ZH
2890 IF Z$="A" OR Z$="a" THEN GOSUB 1170:GOTO 3230 >QR
2900 IF Z$="B" OR Z$="b" THEN GOSUB 1170:GOTO 3400 >QJ
2910 IF Z$="C" OR Z$="c" THEN GOSUB 1170:GOTO 3570 >QW
2920 IF Z$="D" OR Z$="d" THEN GOSUB 1170:GOTO 3740 >QY
2930 IF Z$="E" OR Z$="e" THEN GOSUB 1170:GOTO 3910 >QA
2940 IF Z$="F" OR Z$="f" THEN GOSUB 1170:GOTO 90 >NE
2950 GOTO 2880 >PB
2960 **** dessin du tableau (exercice) **** >YK
2970 GOSUB 1100:LOCATE 34,25:PRINT CHR$(24); " QUESTION >MC
No ";Q;CHR$(24)
2980 RESTORE 1200:FOR I=1 TO X:READ A$,B$,C$,D$,E$:NEXT >HM
I:C=C+1
2990 ORIGIN 62,25:DRAW 0,348:ORIGIN 63,25:DRAW 0,348 >VT
3000 ORIGIN 62,25:DRAW 510,0:ORIGIN 183,25:DRAW 0,348:0 >CR
RIGIN 184,25:DRAW 0,348
3010 ORIGIN 26,26:2,5:DRAW 0,348:ORIGIN 342,25:DRAW 0,348 >XB
3020 ORIGIN 446,25:DRAW 0,348:ORIGIN 572,25:DRAW 0,348: >EE
ORIGIN 573,25:DRAW 0,348
3030 ORIGIN 62,342:2,42:DRAW 510,0:ORIGIN 62,375:DRAW 510,0 >XR
3040 LOCATE 29,1:PRINT CHR$(24);"*** C H I M I E ***" >HC
;CHR$(24)
3050 LOCATE 15,3:PRINT"Nom":LOCATE 25,3:PRINT"SYMBOLE" >BT
3060 LOCATE 35,3:PRINT"No Atom.":LOCATE 45,3:PRINT"Poid >HM
s Atom.":LOCATE 61,3:PRINT"FAMILLE"
3070 RETURN >FD
3080 **** Sortie du programme **** >YD
3090 CLS:MODE 1:GOSUB 1100:H$="** CHIMIE *":Y=3:M=40:G >KG
OSUB 4110
3100 LOCATE 4,10:PRINT CHR$(142);STRING$(32,131);CHR$(1 >KH
41):LOCATE 4,11:PRINT CHR$(133);" Confirmez-vous votre
decision " ;CHR$(138)
3110 LOCATE 4,12:PRINT CHR$(133);STRING$(32,128);CHR$(1 >GP
38):LOCATE 4,13:PRINT CHR$(133);" de quitter le program
me ?(O/N) " ;CHR$(138)
3120 LOCATE 4,14:PRINT CHR$(139);STRING$(32,140);CHR$(1 >DB
35)
3130 A$=INKEY$ >WB
3140 IF A$="O" OR A$="o" THEN 3170 >YJ
3150 IF A$="N" OR A$="n" THEN 90 >WN
3160 GOTO 3130 >ME
3170 CLS:LOCATE 5,11:PRINT CHR$(142);STRING$(30,131);CH >UG
R$(141):LOCATE 5,12:PRINT CHR$(133);STRING$(30,128);CHR
$(138)

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3180 LOCATE 5,13:PRINT CHR$(133);STRING$(30,128);CHR$(1 >DJ
38)
3190 LOCATE 5,14:PRINT CHR$(133);STRING$(30,128);CHR$(1 >MR
38):LOCATE 5,15:PRINT CHR$(137);STRING$(30,140);CHR$(1
34)
3200 LOCATE 8,13:PRINT"AUREVOIR ET,":FOR I=1 TO 500:NEX >DT
T:LOCATE 20,13:PRINT" A BIENTOT !..."
3210 FOR H=1 TO 2000:NEXT >TE
3220 INK 0,1:INK 1,24:MODE 1:BORDER 1:PAPER 0:PEN 1 :EN >YX
D
3230 ***** Trouver NOM ***** >YA
3240 WHILE INKEY<>"":WEND >VQ
3250 CLS:MODE 2:n=103:SC=0:C=3 >YF,
3260 FOR Q=1 TO 11:IF Q=11 THEN 4070 >AG
3270 RANDOMIZE TIME:X=INT(RND*n)+1 >ED
3280 X(Q)=X >XF
3290 FOR J=1 TO Q-1 >MG
3300 IF X(Q)=X(J) THEN 3270 >UD
3310 NEXT J >VD
3320 GOSUB 2960 >XH
3330 C=C+1:LOCATE 27,C:PRINT B$:LOCATE 37,C:PRINT D$:LD >EG
DATE 47,C:PRINT D$:LOCATE 59,C:PRINT E$
3340 LOCATE 10,C:LINE INPUT W$:W$=UPPER$(W$) >NF
3350 IF W$="" OR W$ <> A$ THEN GOTO 3360 ELSE GOT? 3370 >TT
3360 LOCATE 10,C:PRINT SPACE$(13):LOCATE 10,C:FOR m=200 >BF
TO 1 STEP -15:SOUND 1,m,1,15:NEXT m:PRINT A$:GOTO 3380
3370 FOR m=1 TO 200 STEP 10:SOUND 1,m,1,15:NEXT m:SC=SC >AH
+1
3380 NEXT >LF
3390 END >ZK
3400 ***** Trouver SYMBOLE ***** >XK
3410 WHILE INKEY<>"":WEND >VP
3420 CLS:MODE 2:n=103:SC=0:C=3 >YE
3430 FOR Q=1 TO 11:IF Q=11 THEN 4070 >AF
3440 RANDOMIZE TIME:X=INT(RND*n)+1 >EC
3450 X(Q)=X >XE
3460 FOR J=1 TO Q-1 >MF
3470 IF X(Q)=X(J) THEN 3440 >UL
3480 NEXT J >XB
3490 GOSUB 2960 >YF
3500 C=C+1:LOCATE 10,C:PRINT A$:LOCATE 37,C:PRINT C$:LO >DE
DATE 47,C:PRINT D$:LOCATE 59,C:PRINT E$
3510 LOCATE 27,C:LINE INPUT W$ >YK
3520 IF W$="" OR W$ <> B$ THEN GOTO 3530 ELSE GOTO 3540 >TQ
3530 LOCATE 27,C:PRINT SPACE$(5):LOCATE 27,C:FOR m=200 >AQ
TO 1 STEP -10:SOUND 1,m,1,15:NEXT m:PRINT B$:GOTO 3550
3540 FOR m=1 TO 200 STEP 10:SOUND 1,m,1,15:NEXT m:SC=SC >AG
+1
3550 NEXT >LE
3560 END >ZC
3570 ***** Trouver No atom. ***** >YH
3580 WHILE INKEY<>"":WEND >VY
3590 CLS:MODE 2:n=103:SC=0:C=3 >YN
3600 FOR Q=1 TO 11:IF Q=11 THEN 4070 >AE
3610 RANDOMIZE TIME:X=INT(RND*n)+1 >EB
3620 X(Q)=X >XD
3630 FOR J=1 TO Q-1 >ME
3640 IF X(Q)=X(J) THEN 3610 >UJ
3650 NEXT J >WA
3660 GOSUB 2960 >YE
3670 C=C+1:LOCATE 10,C:PRINT A$:LOCATE 27,C:PRINT B$:LO >EC
DATE 47,C:PRINT D$:LOCATE 59,C:PRINT E$
3680 LOCATE 37,C:LINE INPUT W$ >VY
3690 IF W$="" OR W$ <> C$ THEN GOTO 3700 ELSE GOTO 3710 >TY
3700 LOCATE 37,C:PRINT SPACE$(5):LOCATE 37,C:FOR m=200 >AR
TO 1 STEP -10:SOUND 1,m,1,15:NEXT m:PRINT C$:GOTO 3720
3710 FOR m=1 TO 200 STEP 10:SOUND 1,m,1,15:NEXT m:SC=SC >AF
+1
3720 NEXT >LD
3730 END >ZB
3740 ***** Trouver POIDS atom. ***** >YG
3750 WHILE INKEY<>"":WEND >VX
3760 CLS:MODE 2:n=103:SC=0:C=3 >YM
3770 FOR Q=1 TO 11:IF Q=11 THEN 4070 >AN
3780 RANDOMIZE TIME:X=INT(RND*n)+1 >EK
3790 X(Q)=X >YB
3800 FOR J=1 TO Q-1 >MD
3810 IF X(Q)=X(J) THEN 3780 >UR
3820 NEXT J >VK
3830 GOSUB 2960 >YD
3840 C=C+1:LOCATE 10,C:PRINT A$:LOCATE 27,C:PRINT B$:LO >DH
DATE 37,C:PRINT C$:LOCATE 59,C:PRINT E$
3850 LOCATE 47,C:LINE INPUT W$ >VY
3860 IF W$="" OR W$ <> D$ THEN GOTO 3870 ELSE GOTO 3880 >TQ
3870 LOCATE 47,C:PRINT SPACE$(9):LOCATE 47,C:FOR m=200 >AR
TO 1 STEP -10:SOUND 1,m,1,15:NEXT m:PRINT D$:GOTO 3890
3880 FOR m=1 TO 200 STEP 10:SOUND 1,m,1,15:NEXT m:SC=SC >AP
+1
3890 NEXT >MB
3900 END >ZA
3910 ***** Trouver FAMILLE ***** >YF
3920 CLS:MODE 2:n=103:SC=0:C=3 >YK
3930 FOR Q=1 TO 11:IF Q=11 THEN 4070 >AL
3940 RANDOMIZE TIME:X=INT(RND*n)+1 >EH
3950 X(Q)=X >XK
3960 FOR J=1 TO Q-1 >ML
3970 IF X(Q)=X(J) THEN 3940 >UX
3980 NEXT J >MG
3990 GOSUB 2960 >ZA
4000 C=C+1:LOCATE 10,C:PRINT A$:LOCATE 27,C:PRINT B$:LO >DR
DATE 37,C:PRINT C$:LOCATE 47,C:PRINT D$
4010 LOCATE 58,C:LINE INPUT W$:W$=UPPER$(W$) >NN
4020 IF W$="" OR W$ <> E$ THEN GOTO 4030 ELSE GOTO 4040 >BF
4030 LOCATE 58,C:PRINT SPACE$(12):LOCATE 58,C:FOR m=200 >BU
TO 1 STEP -10:SOUND 1,m,1,15:NEXT m:PRINT E$:GOTO 4050
4040 FOR m=1 TO 200 STEP 10:SOUND 1,m,1,15:NEXT m:SC=SC >AC
+1
4050 NEXT >LA
4060 END >YJ
4070 ***** RESULTATS EXERCICES ***** >YD
4080 CLS:MODE 1:GOSUB 1100:H$="* CHIMIE *":Y=3:M=40:GOS >DV
UB 4110:H$=" " "Y=12:M=40:GOSUB 4110:L

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OCATE 12,12:PRINT "SCORE : ";SC;" / 10"
4090 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une >PE
touche >>> ";CHR$(24)
4100 CALL &BB06:GOTO 2770 >TY
4110 '**** CADRES DES TITRES **** >XJ
4120 X=(M-LEN(H$))/2-2 >QD
4130 LE=LEN(H$) >BD
4140 LOCATE X,Y-1:PRINT CHR$(150);STRING$(LE+2,154);CHR >HT
$(156)
4150 LOCATE X,Y:PRINT CHR$(149);" ";H$;" ";CHR$(149) >VB
4160 LOCATE X,Y+1:PRINT CHR$(147);STRING$(LE+2,154);CHR >HM
$(153)
4170 RETURN >FF
4180 '**** Calculs (et formules) **** >YF
4190 MODE 1:CLS:GOSUB 1100:H$="Calculs (et formules)":Y >GD
=3:M=40:GOSUB 4110
4200 LOCATE 5,6:PRINT"A- Masse molaire d'un corps." >ED
4210 LOCATE 5,8:PRINT"B- Volume d'un gaz." >QV
4220 LOCATE 5,10:PRINT"C- Nombre de particules d'un cor >TF
ps."
4230 LOCATE 5,12:PRINT"D- Masse d'un corps." >UL
4240 LOCATE 5,14:PRINT"E- Volume molaire d'un gaz." >EC
4250 LOCATE 5,16:PRINT"F- Nombre de moles d'un corps." >JF
4260 LOCATE 5,18:PRINT"G- Legende." >ZF
4270 LOCATE 5,20:PRINT"H- Retour au menu principal." >GA
4280 LOCATE 1,23:PRINT CHR$(24);" <<< Taper votre >QW
choix >>> ";CHR$(24)
4290 A$=INKEY$ >WK
4300 IF A$="A" DR A$="A" THEN GOSUB 1180:GOTO 4390 >PT
4310 IF A$="B" DR A$="B" THEN GOSUB 1180:GOTO 4510 >PP
4320 IF A$="C" DR A$="C" THEN GOSUB 1180:GOTO 4630 >PW
4330 IF A$="D" DR A$="D" THEN GOSUB 1180:GOTO 4760 >PD
4340 IF A$="E" DR A$="E" THEN GOSUB 1180:GOTO 4870 >QA
4350 IF A$="F" DR A$="F" THEN GOSUB 1180:GOTO 4990 >QG
4360 IF A$="G" DR A$="G" THEN GOSUB 1180:GOTO 5290 >QD
4370 IF A$="H" DR A$="H" THEN GOSUB 1180:GOTO 90 >NE
4380 GOTO 4290 >NH
4390 '*** Masse molaire d'un corps *** >YJ
4400 WHILE INKEY$<"":WEND >VP
4410 MODE 1:CLS:GOSUB 1100:H$="Masse molaire d'un corps >ML
":Y=3:M=40:GOSUB 4110
4420 LOCATE 8,8:PRINT"Formule : " >DG
4430 LOCATE 18,8:PRINT "M(X) = ";LOCATE 25,7:PRINT NN$; >HH
". m(x)":LOCATE 8,9:PRINT STRING$(25,154)
4440 LOCATE 11,11:PRINT NN$; "= 6.02*10 mol" >MG
4450 LOCATE 22,11:PRINT"23 -1" >ZN
4460 LOCATE 12,14:PRINT"(ou 6.02*1E+24)" >HQ
4470 LOCATE 5,17:INPUT"Entrez la valeur de m(x):",rep >BG
4480 resultat=6.02*1E+24*rep >XF
4490 LOCATE 10,20:PRINT " M(X) =";ROUND(resultat,2) >XH
4500 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une >XY
touche >>> ";CHR$(24):CALL &BB06:GOTO 4180
4510 '*** Volume d'un gaz *** >YC
4520 WHILE INKEY$<"":WEND >VT
4530 MODE 1:CLS:GOSUB 1100:H$="Volume d'un gaz":Y=3:M=4 >WV
0:GOSUB 4110
4540 LOCATE 8,8:PRINT"Formule : " >DK
4550 LOCATE 18,8:PRINT "V(x) = n(x) . Vm" >KA
4560 LOCATE 8,9:PRINT STRING$(26,154) >FP
4570 LOCATE 5,12:INPUT"Entrez la valeur de n(x):",n >DZ
4580 LOCATE 5,15:INPUT"Entrez la valeur de Vm :",v >CZ
4590 resultat=n*v >NH
4600 LOCATE 13,20:PRINT"V(x) =";ROUND(resultat,2) >MD
4610 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une >XA
touche >>> ";CHR$(24):CALL &BB06:GOTO 4180
4620 END >ZA
4630 '*** Nombre de particules d'un corps *** >YF
4640 WHILE INKEY$<"":WEND >WV
4650 MODE 1:CLS:GOSUB 1100:H$="Nombre de particules d'u >AB
n corps":Y=3:M=40:GOSUB 4110
4660 LOCATE 8,8:PRINT"Formule : " >DN
4670 LOCATE 18,8:PRINT "N = ":LOCATE 22,7:PRINT NN$; ". >DP
n(x)":LOCATE 8,9:PRINT STRING$(22,154)
4680 LOCATE 11,11:PRINT NN$; "= 6.02*10 mol" >MN
4690 LOCATE 22,11:PRINT"23 -1" >ZV
4700 LOCATE 12,14:PRINT"(ou 6.02*1E+24)" >HM
4710 LOCATE 5,18:INPUT"Entrez la valeur de n(x):",rep >GF
4720 resultat=6.02*1E+24*rep >XC
4730 LOCATE 11,21:PRINT " N =";ROUND(resultat,2) >UC
4740 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une t >PG
ouche >>> ";CHR$(24)
4750 CALL &BB06:GOTO 4180 >TG
4760 '*** Masse d'un corps *** >YK
4770 WHILE INKEY$<"":WEND >VA
4780 MODE 1:CLS:GOSUB 1100:H$="Masse d'un corps":Y=3:M= >XC
40:GOSUB 4110
4790 LOCATE 8,8:PRINT"Formule : " >DT
4800 LOCATE 18,8:PRINT "m(x) = n(x) . M(x)" >MN
4810 LOCATE 8,9:PRINT STRING$(28,154) >FP
4820 LOCATE 5,12:INPUT"Entrez la valeur de n(x):",n >DX
4830 LOCATE 5,15:INPUT"Entrez la valeur de M(x):",M >DP
4840 resultat=n*M >NW
4850 LOCATE 13,20:PRINT"m(x) =";ROUND(resultat,2) >ML
4860 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une t >XH
ouche >>> ";CHR$(24):CALL &BB06:GOTO 4180
4870 '*** Volume molaire d'un gaz *** >ZB
4880 WHILE INKEY$<"":WEND >VC
4890 MODE 1:CLS:GOSUB 1100:H$="Volume molaire d'un corp >PC
s":Y=3:M=40:GOSUB 4110
4900 LOCATE 8,8:PRINT"Formule : " >DK
4910 LOCATE 18,8:PRINT "Vm(x) =":LOCATE 25,7:PRINT NN$; >JF
". V(x)":LOCATE 8,9:PRINT STRING$(25,154)
4920 LOCATE 11,11:PRINT NN$; "= 6.02*10 mol" >MK
4930 LOCATE 22,11:PRINT"23 -1" >ZR
4940 LOCATE 12,14:PRINT"(ou 6.02*1E+24)" >HU
4950 LOCATE 5,18:INPUT"Entrez la valeur de V(x):",rep >GL
4960 resultat=6.02*1E+24*rep >XJ
4970 LOCATE 8,21:PRINT" Vm(x) =";ROUND(resultat,2) >VN
4980 LOCATE 1,23:PRINT CHR$(24);" <<< Taper une >XL
touche >>> ";CHR$(24):CALL &BB06:GOTO 4180
4990 '*** nombre de moles *** >ZE
5000 WHILE INKEY$<"":WEND >VL
5010 MODE 1:CLS:GOSUB 1100:H$="Nombre de moles ":Y=3:M= >XB
40:GOSUB 4110

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5020 LOCATE 9,10:PRINT"Solide,Liquide ou Gaz ?":LOCATE >XK
16,11:PRINT"(S/L/B)"
5030 z$=INKEY$ >YH
5040 IF z$="S" OR z$="s" THEN GOSUB 1180:GOTO 5080 >QB
5050 IF z$="L" OR z$="l" THEN GOSUB 1180:GOTO 5170 >QM
5060 IF z$="B" OR z$="b" THEN GOSUB 1180:GOTO 5200 >QW
5070 GOTO 5030 >YM
5080 *** Nombre de moles d'un solide *** >YF
5090 MODE 1:CLS:GOSUB 1400:H$="Nombre de moles d'un sol >RE
ide":Y=3:M=40:GOSUB 4110
5100 LOCATE 8,8:PRINT"Formule :" >DC
5110 LOCATE 18,8:PRINT "n(x) =":LOCATE 24,8:PRINT STRIN >TP
6$(6,154):LOCATE 24,7:PRINT " M(x)":LOCATE 24,9:PRINT "
M(x)"
5120 LOCATE 5,12:INPUT"Entrez la valeur de m(x)":h >DH
5130 LOCATE 5,15:INPUT"Entrez la valeur de M(x)":k >DF
5140 resultat=h/k >NL
5150 LOCATE 13,20:PRINT"n(x) =":ROUND(resultat,2) >WF
5160 LOCATE 1,23:PRINT CHR$(24); " <<< Taper une t >XB
ouche >>> ";CHR$(24):CALL &BB06:GOTO 4180
5170 *** Nombre de moles d'un liquide *** >YF
5180 MODE 1:CLS:GOSUB 1100:H$="Nombre de moles d'un liq >UR
uide":Y=3:M=40:GOSUB 4110
5190 GOTO 5100 >MJ
5200 *** Nombre de moles d'un gaz *** >XK
5210 MODE 1:CLS:GOSUB 1100:H$="Nombre de moles d'un gaz >LV
":Y=3:M=40:GOSUB 4110
5220 LOCATE 8,8:PRINT"Formule :" >DF
5230 LOCATE 18,8:PRINT "n(x) =":LOCATE 24,8:PRINT STRIN >UA
6$(6,154):LOCATE 24,7:PRINT " V(x)":LOCATE 24,9:PRINT "
Vm(x)"
5240 LOCATE 5,12:INPUT"Entrez la valeur de m(x)":p >DV
5250 LOCATE 5,15:INPUT"Entrez la valeur de Vm(x)":r >FJ
5260 resultat=p/r >NF
5270 LOCATE 13,20:PRINT"n(x) =":ROUND(resultat,2) >WJ
5280 LOCATE 1,23:PRINT CHR$(24); " <<< Taper une t >XE
ouche >>> ";CHR$(24):CALL &BB06:GOTO 4180
5290 '*** Legende *** >YJ
5300 CLS:MODE 1:GOSUB 1100:H$="** Legende **":Y=3:M=40: >PW
GOSUB 4110
5310 LOCATE 5,7:PRINT"m = masse d'un corps." >UV
5320 LOCATE 5,9:PRINT"V = volume d'un gaz." >TY
5330 LOCATE 5,11:PRINT"n = nbre de moles." >QQ
5340 LOCATE 5,13:PRINT"Vm = volume molaire d'un corps." >LG
5350 LOCATE 5,14:PRINT"Nn$ = " nbre d'AVOGADRO." >VP
5360 LOCATE 5,17:PRINT "N = nbre de particules." >ZE
5370 LOCATE 5,19:PRINT "M = masse molaire atom. d'un co >TU
rps."
5380 LOCATE 1,23:PRINT CHR$(24); " <<< Taper une >PH
touche >>> ";CHR$(24)
5390 CALL &BB06:GOTO 4180 >TH
5400 RETURN >FC

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