

Mandelbulb 3D Tutorial

Master Training v2.3

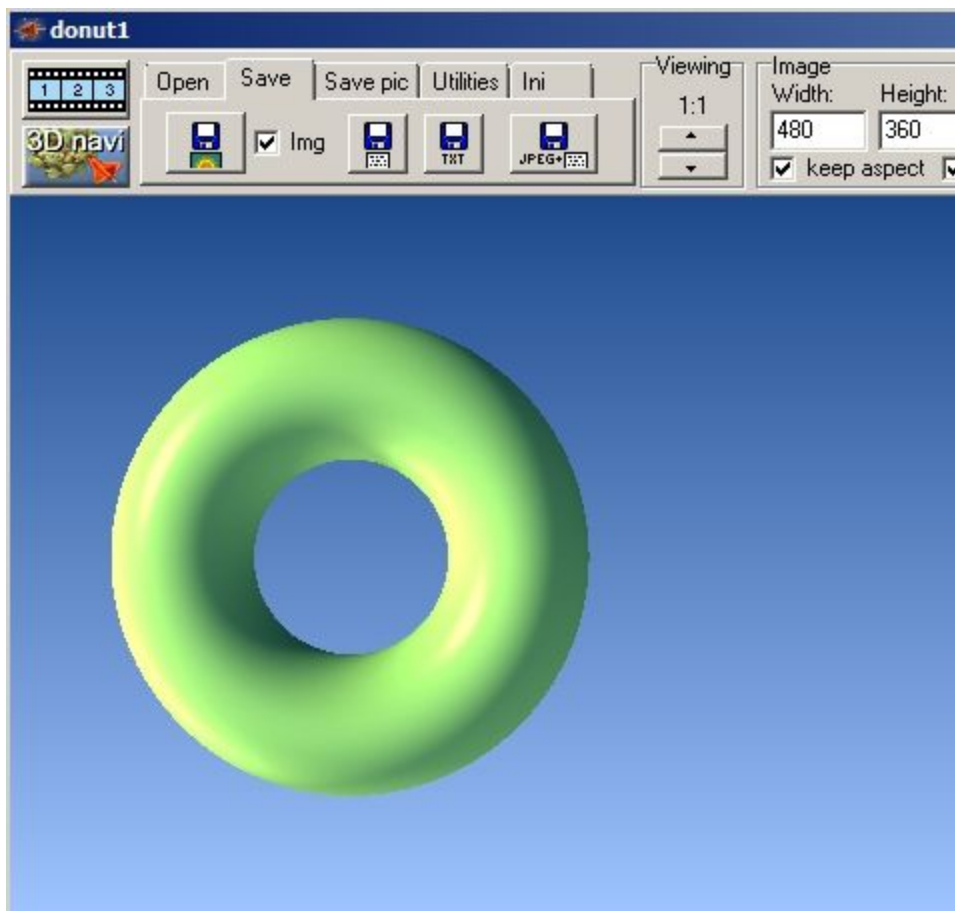
This list is not the end all, be all at this point, but over a period of time, as I add new finds and other tutorials get published I will continue to add to it so that it does become the authoritative list of Mandelbulb 3D tutorials on the internet! So, if you view this PDF file in June, it could be a completely different document in November. You should look for the newest version on the FaceBook group [Mandelbulb Maniacs](#) in the file section.

It is my intention to start with tutorials for the beginner and progress through to the latest cutting techniques and tips! However, keep in mind the number of available tutorials if

you find something that does not look in the right place. It should be mentioned that many of the tutorials listed here were written for an earlier version of Mandelbulb 3D than the current version you are using. However, the parameters, techniques and formulas used in them should work flawlessly in your software. Of course there may be exceptions to the rule but very few.

Images and a number system will be used throughout whenever possible. These tutorials can definitely improve your understanding of the software and the settings required to create some really awesome fractals. Let's get started.

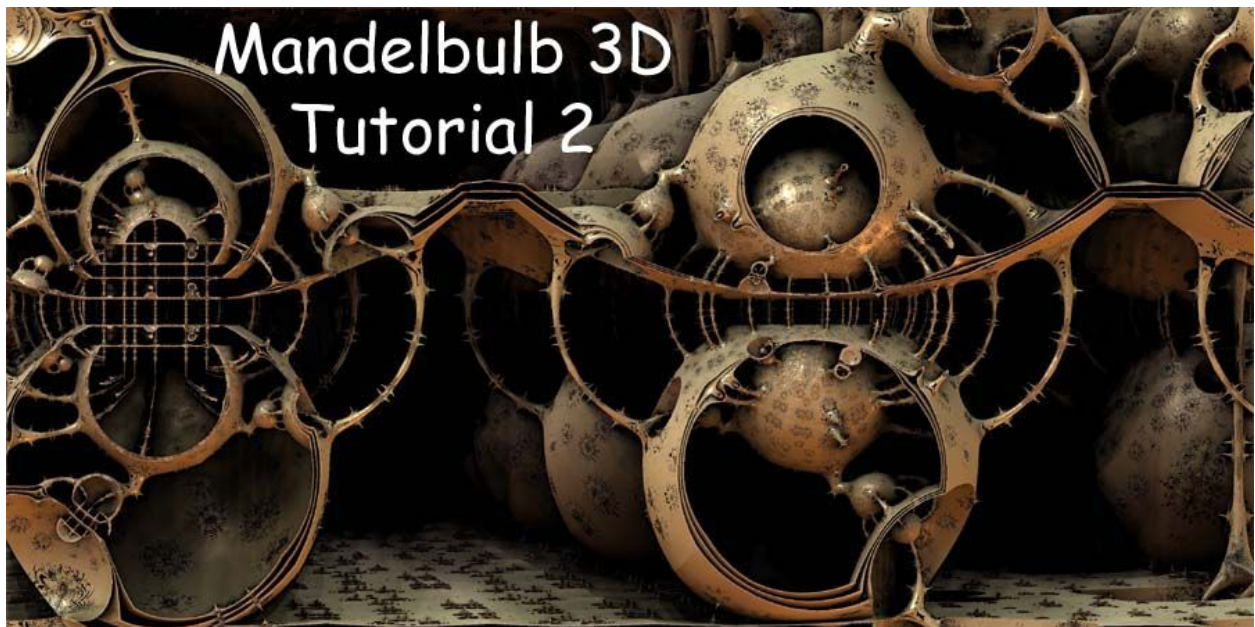
1. PC: NHA i # OM: <>: , : H=>F, OF, i # 'O?QNMN>JM



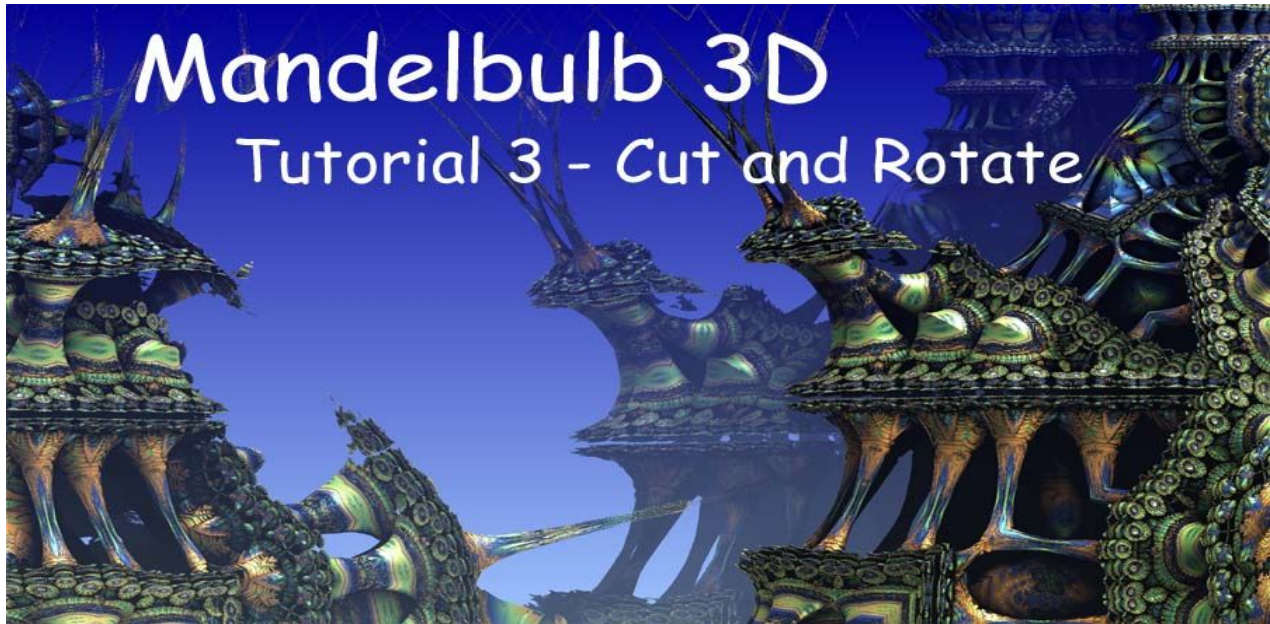
2. , : H=>F, OF, i # '3ON LC F; S" : F3>HHS



3. [Mandelbulb 3D Tutorial](#)



4. $z \mapsto H \Rightarrow F, OF, i \# '3ON LC F1 ; S' : F3 > HHS$



5. $z \mapsto H \Rightarrow F, OF, i \# '3ON LC F / \hat{A}! : M \times '3O M$

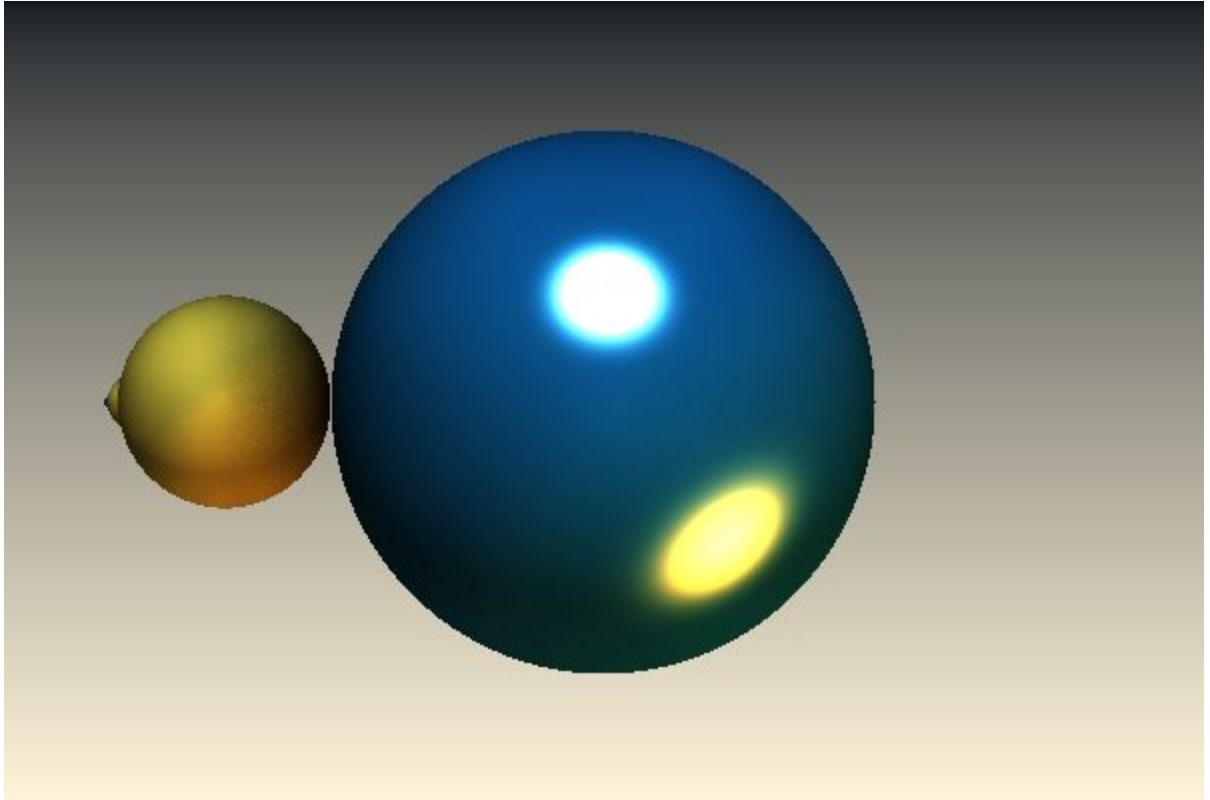
6. $z \mapsto H \Rightarrow F, OF, i \# '3ON LC Ffi \hat{A}3O M H = '3LGEM$

7. $(M.F. NGA '2NLO <NOL > M(H', ! i \#$

8. $z \mapsto H \Rightarrow F, OF, i \# 'ç', : M \triangleright LGA i \# '- : PC$

9. $z \mapsto H \Rightarrow F, OF, i \# 'ç' - : PCA: NGA '3O$

10. 00GEÊHÊ# CNSÂ1 >?F><NC HM H= '3L: HM: L>H<S



11. „“ J>L<>HNG QJ LGA'MNCHA'CI, ! I # ; S'
=: LEÔ >: G

12. (HMABN+ABNÕŽ , I # '+ABNHGA'3ONI LC F
; S'A: HHD H=: F

13. , : H=>F, OF, I # '(HÕ: H='I ONM<>'L>H=>L'
; S'2: ; G>fl~'

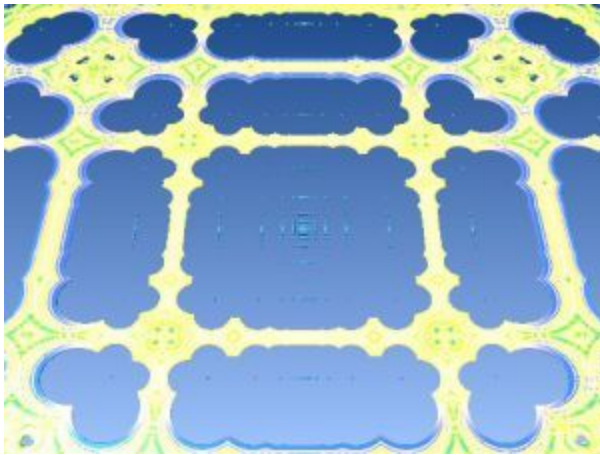
14. , : H=>F, OF, I # 'Õ2: PCHA'FABNMNCHAM
; S'2: ; G>fl~'

15. , : H=>F, OF, I # 'Õ00GEÊHÊ# CNS'6 I LECHA'QNB'G: JM
; S'2: ; G>fl~'

16. 00GEÊHÊ# CNS'Â1 >?F><NC HM H= '3L: HM: L>H<S'

17. '00GEÕHÊ# CNSÂ# I %: # >JNB'I ?%G=F,

18. ! | # ! OLCHA '2BO '3ON LC F
19. " OMNI G " >@BN, : J M% L, : H=>F, OF, | #
20. , : H=>F, OF, ! : M<+@BN: H=" | H L'3ON LC F
21. , : H=>F, OF, | # # \$<| G ; G: N>, R, | =>'3ON LC F
22. +S: JOHI P'GI =G L? L, ! | #
23. ž Hž G: TCHA '2OL?~ '&OG>FCH>

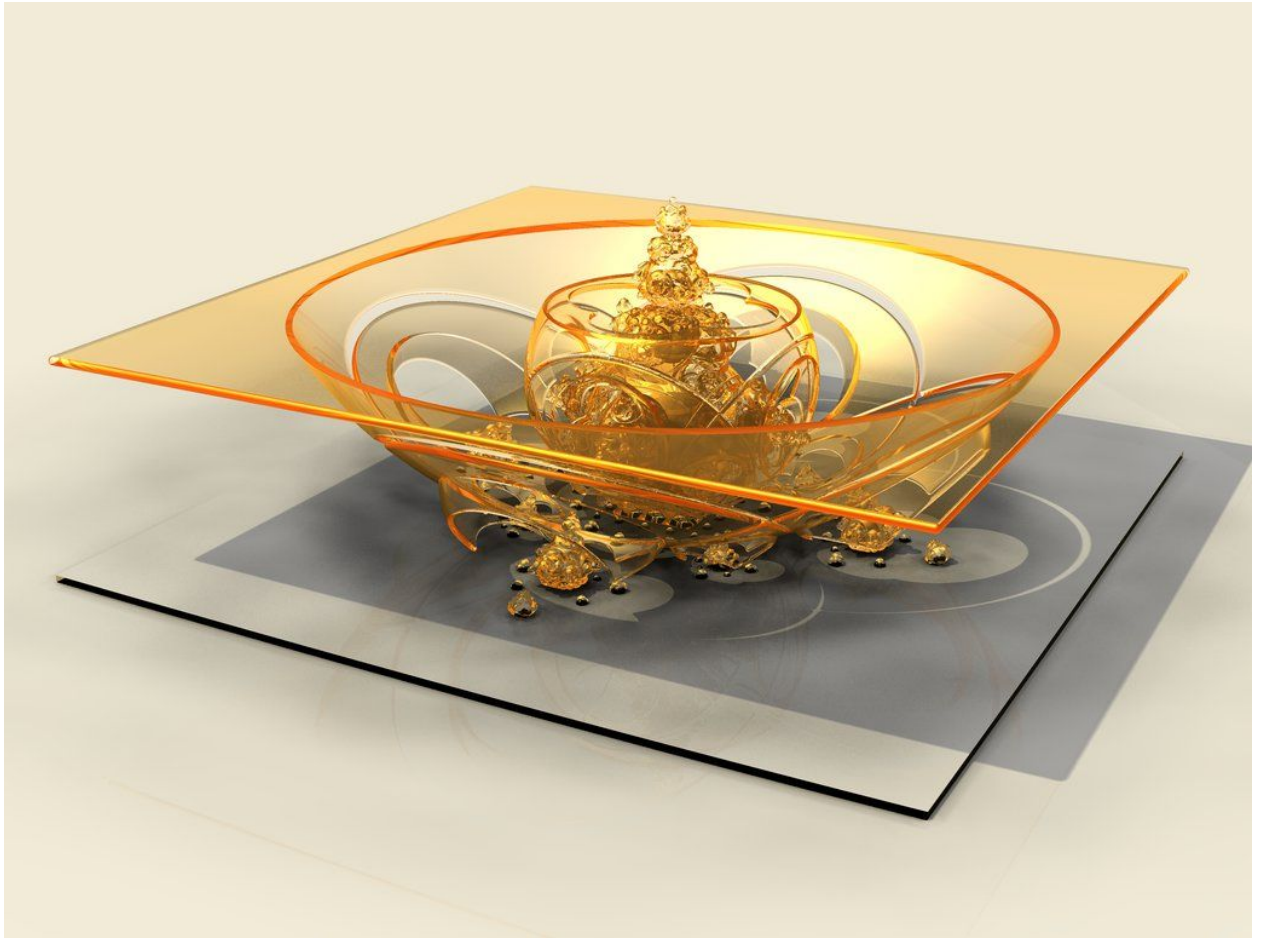


24. 1 \$%+\$" 3(5\$ # (%2'NDN
25. ' . 6 '3. ! 4(+# '&. # '+ž - # 2" ž / \$'QOB, ; | =
26. O | # ! OF, '3ON LC F
27. % LG OF, , : H=: F. S* (%2'Ö3OM
28. , : H=>F, OF, | # ž J I H '= (%2'3ON LC F
29. ž Hž G: TCHA '2OL?Ê | | NMÊ' | QČI
30. , : H=>F, OF, | # # \$<| G ; G: N>, R, | =>'3ON LC F

31. L>NOLHI ?B>: =Ö>CABNG: J'Ö, : H=>F, OF, I # 'OÖB'
/: L: M



32. &F. MVÕ(%2I HFS'ÇI# \$<I G; 'Õ, ! I # 'OQB'/: L: G >N\L



33. , : H=>F, OF, I # 'O OGEÊÊ# ÇNS ž HNO FC MCHA'

34. ! : MÇ (HNU , ; I # '% LG OF. '\$=ÇI L: H=) (3" I G J Ç>L'

35. \$PI FONÇ HI ? : 'ŹL <N Fç : 'ç'N 'çT'

36. &>H>L: MCHA'3Ç>= '(G : A>M4MCHA! Ç'1 >H=>L'

37. ' I Q'N 'A>N, ! I # 'QI LE'I H, : <. 2'7' " ĀĀ'

, : P>LGEM

38. ' I Q'N 'ž ==: ! : <EAU OH= '(G : A>'N , : H=>F, OF, '

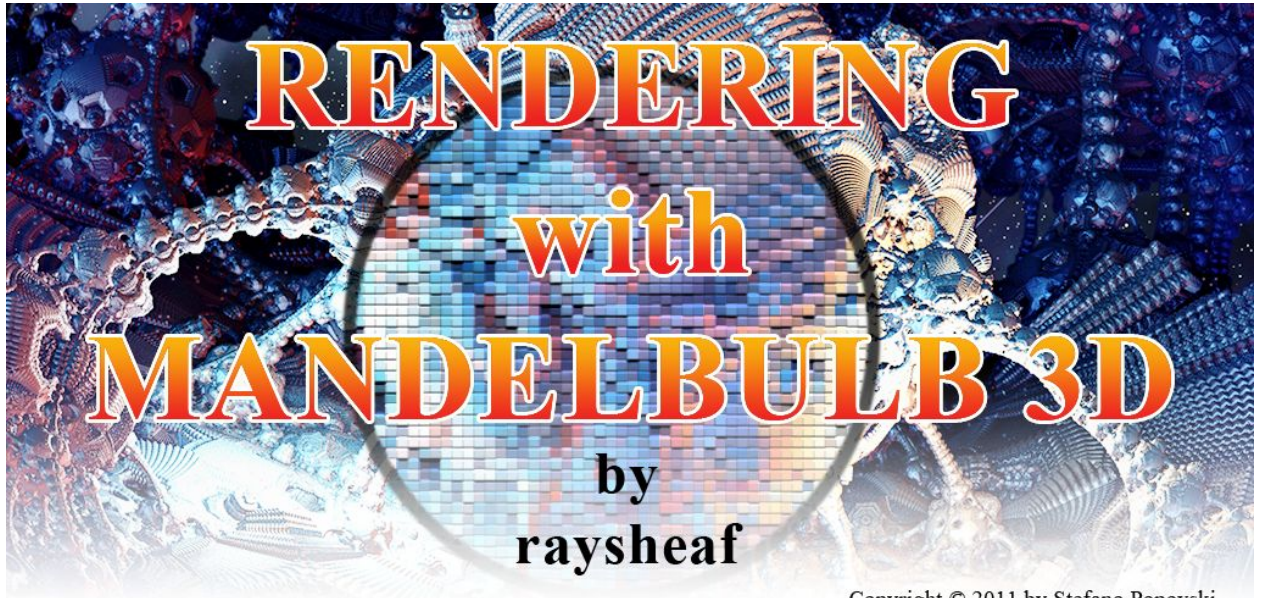
I #'

39. , : H=>F, OF, i # ĀG S'J LI <>MĀ

; S'><<I : LNM

40. ∅ : H=>F, OF, i # ' - : PQA: NI L'3ON LC F
41. %L: <N FCGA'8I OLMF?C%L: <N F, SM>LG>M'∅ :
42. BI QNI 'OM' " I H=(NI OHM2QOKB'
43. ∅ : H=>F, OF, i # ' O OGE'5I FOG >NLG'+CABMCHA'3ON LC F
44. ∅ : H=>F, OF, i # '&H: LFG>M# C?>L>HN6 : S'
45. ∅ : H=>F, OF,) OFC 'M CH>'NONI '
46. (HMG>ž G: TCHA! I Rê'(%2'NON
47. 6 ž 8'? M>L'AH: LF? LG OF MÀ2: G J F>J: L: G MÀ
48. 4MCHA' / I MOC H: F+CABNMO'5I FOG >NLG'+CABNGH'
∅ ! i # '
49. ∅ : M<, ∅ : H=>F, OF, ž HCG : NC H'3ON LC F
50. ∅ ! i # 'N i # ' / LGIN3ON LC F
51. ' >CABNG: JMÀFABNG: JMÀ: ==CHA'J>I J F>'HI ; D<NM
52. 500: FL>?>L>H<>'? L, ! i # '% LG OF MOJ =: N=>∅ :
53. *I <B'<O, >'G CHONN

54. 1 >H=>LCHA 'QQB', : H=>F, OF, 'i #



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55. , : H=>F, OF, 'i # 'Ö- >A: NP>'3ONI '

56. , : H=>F, OF, 'i # '3B>FÖ NMF>'! I R'NON LC F

57. ! : LHM>'S'NON LC FÖH>Q 'P>LNC H'

58. , ! i # '! OLHCHA '2BO '3ONI LC F

59. 5ÖD: FJ: LNC FAOG>'N 'Ê>H" 6 : LJ Ê

60. , : H=>F, OF, '%ž O ÖDAA>MNC HM

61. , : H=>F, OF, 'i # '9'2N LN3ONI LC F

62. 2OLPÖ: FND M' L'NB>'(HMG>'I ?3AF: =3>NL: '

63. ž G: TCHA! I R'2J B>L>M3ONI LC F

64. 2J><C FCHA I ?ž! I R! OF, M'

65. 6 B: N' : JJ>HMCA

66. ' : H=FGHA '8I OL! : FMVÁ '

67. /F: <CHA I ; D<NGH', ! i # 'QQB I ONi # '- : PC

68. 5I FOG >NL<'+CBN. LG>HN NC H'

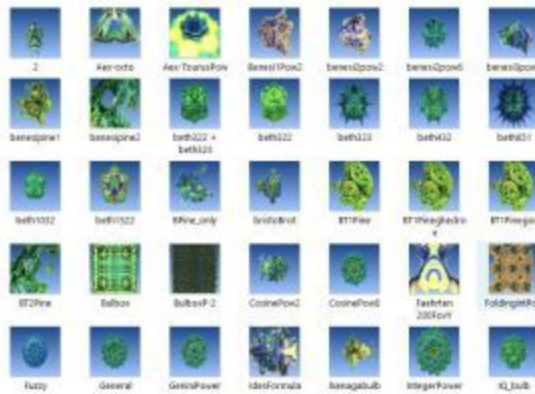
69. ! | # '=(%2'2B: J>M
70. ! | # Â%G>F= ' ?'=>J NB' AOG>
71. 2G G>SM H= # (%2' J.F. SCHA'
72. \$ASJ NC H' / I NN>LS ÅÅ6 3%Ç
73. 3ON LC F, ; H=>F, OF, ' | #'
74. ! | # " | H L'3ON LC F
75. ž ! | R, | = ~ 'OML>F>: M='
76. 3B> %H Q>L'2OL?
77. (HNU 'N , ; H=>F, O, ' | # '3ON LC F
78. 6 BS' (=I H>: H'Ê HÊ2G>LJ CHNËC
79. 3I N LG: FNON LC F
80. - | 'G | L>'HI O' | H'L><O U <: F?L: <N FM
81. 2BI LN, ! | # 'ž HCG: NC H'3ON LC F.
82. 2BI LN, ! | # 'ž HCG: NC H'3ON LC F~'
83. 2BI LN, ! | # 'ž HCG: NC H'3ON LC F|'
84. 2BI LN, ! | # 'ž HCG: NC H'3ON LC F/'
85. 2BI LN, ! | # 'ž HCG: NC H'3ON LC Ffi'
86. ž " | G J: LOM H'I ?2NLO<NOL>M
87. # \$ " | G ; G: N'G | =>M P>LPG>Q'
88. " BI | M' SI OL' I QH'BI OM'
89. - | N>M H" SFG=>L(%2' M'NCHAM
90. - | N>MCH'NB>'2J B>L>'%H LG OF. >'

91. ! | # ' ? LG OF ' H: G > M FJ B: ; > N<: fSQ / # ž 3\$#

Main formulas alphabetically

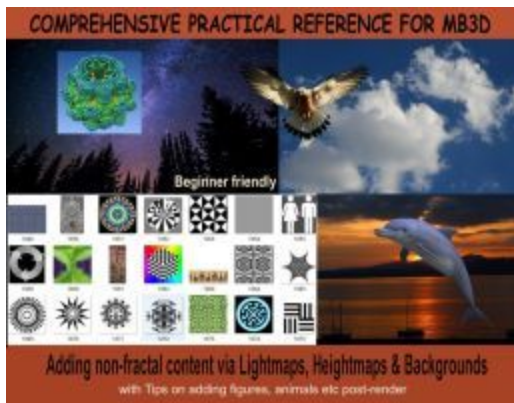
Aer	Aer2	Aer3	Aer4	Aer5	Aer6
Aer7	Aer8	Aer9	Aer10	Aer11	Aer12
Aer13	Aer14	Aer15	Aer16	Aer17	Aer18
Aer19	Aer20	Aer21	Aer22	Aer23	Aer24
Aer25	Aer26	Aer27	Aer28	Aer29	Aer30
Aer31	Aer32	Aer33	Aer34	Aer35	Aer36
Aer37	Aer38	Aer39	Aer40	Aer41	Aer42
Aer43	Aer44	Aer45	Aer46	Aer47	Aer48
Aer49	Aer50	Aer51	Aer52	Aer53	Aer54
Aer55	Aer56	Aer57	Aer58	Aer59	Aer60
Aer61	Aer62	Aer63	Aer64	Aer65	Aer66
Aer67	Aer68	Aer69	Aer70	Aer71	Aer72
Aer73	Aer74	Aer75	Aer76	Aer77	Aer78
Aer79	Aer80	Aer81	Aer82	Aer83	Aer84
Aer85	Aer86	Aer87	Aer88	Aer89	Aer90
Aer91	Aer92	Aer93	Aer94	Aer95	Aer96
Aer97	Aer98	Aer99	Aer100		

92. 500: FL>?>L>H<>' ? L, ! | # '% LG OF: MOJ =: N=>=.



93. 4 / # ž 3\$# Ő' SFCH=>L(%2'5: LC MĊ HMŐHI Q 'QŪB'HI N̈M

94. ' >ĀBNG: J M̈+ĀBNG: J M̈! : <EAU OH=M̈: ==ĀA'
 ?ĀOL>M



95. # (%2'2B: J >'0 OG&E'1 >?>L>H<>'

96. [! | : L=\(%2 : , ! | #](#)



97. [3B>'3I LOM% LG OF: >'? L, ! | #](#)



98. [# \\$ " | G ; @: N>'I P>LPG>Q](#)

For those that like video tutorials I highly recommend Don Whitaker.

1. [, : H=>F, OF, 'i # '3ON LC FM](#)

2. [, : H=>F, OF, 'i =" | Q '3I '2N LMž H='6 BSĀ](#)

3. [, : H=>F, OF, '3ON LC FĀ%L: <N F\(G : A>](#)

4. **[Mandelbulb 3d tutorial 5/4/14](#)**

5. [3ON LC FĀĀĀ' | Q 'N 'OM : HG : N='B>CABNĖ : J MOMBĀ
H>Q, Ā " , ! | #](#)

6. [/ | MOC H: F+CABN3ON LC F](#)

7. ., : H=>F, OF, i # ' / I MOC H: F+ CABN3ON LC F
8. 343. 1(ž +Õ . 6 '3. , ž * \$ %1 ž " 3ž +ž 13'42(- & ' , ž - # \$ +! 4 +! i # Õ %>> ž JJ ,
9. ., : H=>F, OF, i = 'NDN LC F
10. " GH>G : NG %& : <N FNDN LC F
11. ., : H=>F, OF, i = 'NDN LC F; OF I Rê ' ,
12. ., : H=>F, OF, i = 'NDN LC F; OF I Rê ' ,
13. ., : H=>F, OF, i # '3ON LC FÕž HCG : NC H'6 : FENBU OAB '
14. ' I Q 'N : HCG : N 'G' , : H=>F, OF, i = 'OMHA '5 QND: F =O, : H= * : F>G>L'NDN LC F
15. %& : <N F?>MNÕ3LO J S / " I OL" # %& : <N F" I G J Ç. NC H'

1 \$2. 41" \$2Â

1. # I QHF : = 'NB> F. N>MNB> , , : H=>F, OF, i # 'B>L>Å
2. " OMNI G ' ? LG OF. MP 'NL: HMNI LG M
3. 3>RNOL> '3 '1 >?>L>H<> (G : A> ' +Ç L: LS'
4. ! A? HM
5. 3>RNOL>J Ç N
6. i = ÅE'
7. ! >H" H Q: L= '3>RNOL> ž L<BÇ>'
8. 3>RNOL>NÀ I G'
9. JF. H>NN>RNOL> 'G : J M
10. (G : A>: ?>LÀ I G'
11. ""3\$7341\$! (-'
12. 3>RNOL>2J I N

13. 3>RNOL> ž L<BQ>
14. 3>RNOL>, : N
15. . J>H% I N A>
16. 3>RNOL>* GA
17. 6 >N : HP: M
18. I # 3I N ĤMP%1 \$\$ 3>RNOL> 3 1 >?>L>H<> (G : A> +C L: LS
19. I LAO>?E>
20. % N M I JS

, : JMĀ

1. ?L: N<B: I MG: J J: <E:(
2. , ! I # " I F OL : JM
: S 4 H=>: =Q <: =>G S
3. L" : MM LN=>, ! I # G: JM
: S" G=L" B: I M
4. , S, ž / 2 ? L, : H=>F OF I #
: S MISTSE

/: L: G >NĪMĀ

1. , ! I # /: L: G >NĪM: <E"" "
: S HG"" ~ ~
2. G: I =H>Q J: <E Q! S 3I J: M "" ~
3. , ! I # G: J / ž " * P
4. 3Q>: E>LM# >FABN, ! I # /: L: G >NĪM%OH
5. /: L: G >NĪL/: <E % L, : H=>F OF i =
6. +SMĀLAG: i = +: H=M: J >J: L: G >NĪM

7. <æB: I MG: H=>F OF, i = J: L: G >N LJ: <E' .
8. 2SG , : H=>F OF, i # /: L: G J: <E'
9. , : H=>F OF, i # J: L: G >N LJ: <E'
: S' >F >HG .
10. , : H=>F OF, i = /: L: G >N L /: <E' .
: S' fi?CHA >LM
11. , : H=>F OF, i = /: L: G >N L /: <E' .
: S' fi?CHA >LM
12. %CN>L% LA>, : J M% L, ! i #'
: S' MISTSE'
13. , ! i # '%L: <N FMQCNB' /: L: G >N LM' I F > <N = ; S'
N\$H > & L: ?R'
14. , ! i # 'QCNB' /: L: G >N LM S' # N\$H > & L: ?R'
15. " L: ?N6 > ; # >MAHM
16. %L: <N F% LOG M' /: L: G >N LM
17.) I LA> ž ; : F ' Ō / I HAMQCNB' 4 H=>: = ž < : => G S: ~ .
/: A > M ? Q I H=> L ? OF (G : A > M)
18. " B: LF > M ON < B * OHEF >) LĀ
19. 1 I M > G : LG > \$ = Q: L = M
20. 3L > HN H' 2BO < E'
21. 9 I N\$: # — < M

