> # $h^e + h + e = prime$ **by** $H \cdot E$ '20 − 8 − 17 :

> $c := 0$:**for** h **from** 1 **to** 100 **do for** e **from** 1 **to** 100 **do if** $isprime\left(h^e + h + e\right)$ **then** $c := c + 1 : print\left([h]^e + \{h\} + e = \left(evalf\left(h^e + h + e\right)\right)Prime[H \cdot E](No\{c\})\right) : print( )$ **fi**:
> od:od

$$[1] + \{1\} + 1 = 3.\ Prime_{H \cdot E}(No\ \{1\})$$

$$[1]^3 + \{1\} + 3 = 5.\ Prime_{H \cdot E}(No\ \{2\})$$

$$[1]^5 + \{1\} + 5 = 7.\ Prime_{H \cdot E}(No\ \{3\})$$

$$[1]^9 + \{1\} + 9 = 11.\ Prime_{H \cdot E}(No\ \{4\})$$

$$[1]^{11} + \{1\} + 11 = 13.\ Prime_{H \cdot E}(No\ \{5\})$$

$$[1]^{15} + \{1\} + 15 = 17.\ Prime_{H \cdot E}(No\ \{6\})$$

$$[1]^{17} + \{1\} + 17 = 19.\ Prime_{H \cdot E}(No\ \{7\})$$

$$[1]^{21} + \{1\} + 21 = 23.\ Prime_{H \cdot E}(No\ \{8\})$$

$$[1]^{27} + \{1\} + 27 = 29.\ Prime_{H \cdot E}(No\ \{9\})$$

$$[1]^{29} + \{1\} + 29 = 31.\ Prime_{H \cdot E}(No\ \{10\})$$

$$[1]^{35} + \{1\} + 35 = 37.\ Prime_{H \cdot E}(No\ \{11\})$$

$$[1]^{39} + \{1\} + 39 = 41.\ Prime_{H \cdot E}(No\ \{12\})$$

$$[1]^{41} + \{1\} + 41 = 43.\ Prime_{H \cdot E}(No\ \{13\})$$

$$[1]^{45} + \{1\} + 45 = 47.\ Prime_{H \cdot E}(No\ \{14\})$$

$$[1]^{51} + \{1\} + 51 = 53.\ Prime_{H \cdot E}(No\ \{15\})$$

$$[1]^{57} + \{1\} + 57 = 59.\ Prime_{H \cdot E}(No\ \{16\})$$

$$[1]^{59} + \{1\} + 59 = 61.\ Prime_{H \cdot E}(No\ \{17\})$$

$$[1]^{65} + \{1\} + 65 = 67. \ Prime_{H \cdot E}(No \ \{18\})$$

$$[1]^{69} + \{1\} + 69 = 71. \ Prime_{H \cdot E}(No \ \{19\})$$

$$[1]^{71} + \{1\} + 71 = 73. \ Prime_{H \cdot E}(No \ \{20\})$$

$$[1]^{77} + \{1\} + 77 = 79. \ Prime_{H \cdot E}(No \ \{21\})$$

$$[1]^{81} + \{1\} + 81 = 83. \ Prime_{H \cdot E}(No \ \{22\})$$

$$[1]^{87} + \{1\} + 87 = 89. \ Prime_{H \cdot E}(No \ \{23\})$$

$$[1]^{95} + \{1\} + 95 = 97. \ Prime_{H \cdot E}(No \ \{24\})$$

$$[1]^{99} + \{1\} + 99 = 101. \ Prime_{H \cdot E}(No \ \{25\})$$

$$[2] + \{2\} + 1 = 5. \ Prime_{H \cdot E}(No \ \{26\})$$

$$[2]^{3} + \{2\} + 3 = 13. \ Prime_{H \cdot E}(No \ \{27\})$$

$$[2]^{7} + \{2\} + 7 = 137. \ Prime_{H \cdot E}(No \ \{28\})$$

$$[2]^{9} + \{2\} + 9 = 523. \ Prime_{H \cdot E}(No \ \{29\})$$

$$[2]^{19} + \{2\} + 19 = 524309. \ Prime_{H \cdot E}(No \ \{30\})$$

$$[2]^{27} + \{2\} + 27 = 1.34217757 \ 10^{8} \ Prime_{H \cdot E}(No \ \{31\})$$

$$[2]^{33} + \{2\} + 33 = 8.589934627 \ 10^{9} \ Prime_{H \cdot E}(No \ \{32\})$$

$$[3] + \{3\} + 1 = 7. \ Prime_{H \cdot E}(No \ \{33\})$$

$$[3]^{5} + \{3\} + 5 = 251. \ Prime_{H \cdot E}(No \ \{34\})$$

$$[3]^{13} + \{3\} + 13 = 1.594339 \ 10^{6} \ Prime_{H \cdot E}(No \ \{35\})$$

$$[3]^{25} + \{3\} + 25 = 8.472886095 \ 10^{11} \ Prime_{H \cdot E}(No \ \{36\})$$

$$[3]^{97} + \{3\} + 97 = 1.908805632 \ 10^{46} \ Prime_{H \cdot E}(No \ \{37\})$$

$$[4]^{3} + \{4\} + 3 = 71. \ Prime_{H \cdot E}(No \ \{38\})$$

$$[4]^{5} + \{4\} + 5 = 1033. \ Prime_{H \cdot E}(No \ \{39\})$$

$$[4]^{11} + \{4\} + 11 = 4.194319 \ 10^{6} \ Prime_{H \cdot E}(No \ \{40\})$$

$$[4]^{15} + \{4\} + 15 = 1.073741843 \ 10^{9} \ Prime_{H \cdot E}(No \ \{41\})$$

$$[4]^{39} + \{4\} + 39 = 3.022314549 \ 10^{23} \ Prime_{H \cdot E}(No \ \{42\})$$

$$[4]^{41} + \{4\} + 41 = 4.835703278 \ 10^{24} \ Prime_{H \cdot E}(No \ \{43\})$$

$$[5] + \{5\} + 1 = 11. \ Prime_{H \cdot E}(No \ \{44\})$$

$$[5]^{7} + \{5\} + 7 = 78137. \ Prime_{H \cdot E}(No \ \{45\})$$

$$[5]^{37} + \{5\} + 37 = 7.275957614 \ 10^{25} \ Prime_{H \cdot E}(No \ \{46\})$$

$$[6] + \{6\} + 1 = 13. \ Prime_{H \cdot E}(No \ \{47\})$$

$$[6]^{7} + \{6\} + 7 = 279949. \ Prime_{H \cdot E}(No \ \{48\})$$

$$[7]^{3} + \{7\} + 3 = 353. \ Prime_{H \cdot E}(No \ \{49\})$$

$$[7]^{11} + \{7\} + 11 = 1.977326761 \ 10^{9} \ Prime_{H \cdot E}(No \ \{50\})$$

$$[7]^{17} + \{7\} + 17 = 2.326305140 \ 10^{14} \ Prime_{H \cdot E}(No \ \{51\})$$

$$[7]^{33} + \{7\} + 33 = 7.730993720 \ 10^{27} \ Prime_{H \cdot E}(No \ \{52\})$$

$$[8] + \{8\} + 1 = 17. \ Prime_{H \cdot E}(No \ \{53\})$$

$$[8]^{3} + \{8\} + 3 = 523. \ Prime_{H \cdot E}(No \ \{54\})$$

$$[8]^{21} + \{8\} + 21 = 9.223372037 \ 10^{18} \ Prime_{H \cdot E}(No \ \{55\})$$

$$[8]^{25} + \{8\} + 25 = 3.777893186 \ 10^{22} \ Prime_{H \cdot E}(No \ \{56\})$$

$$[9] + \{9\} + 1 = 19. \ Prime_{H \cdot E}(No \ \{57\})$$

$$[9]^{5} + \{9\} + 5 = 59063. \ Prime_{H \cdot E}(No \ \{58\})$$

$$[9]^{89} + \{9\} + 89 = 8.464149783 \ 10^{84} \ Prime_{H \cdot E}(No \ \{59\})$$

$$[10]^{3} + \{10\} + 3 = 1013. \ Prime_{H \cdot E}(No \ \{60\})$$

$$[11] + \{11\} + 1 = 23. \ Prime_{H \cdot E}(No \ \{61\})$$

$$[11]^{69} + \{11\} + 69 = 7.179517789 \ 10^{71} \ Prime_{H \cdot E}(No \ \{62\})$$

$$[12]^{13} + \{12\} + 13 = 1.069932054 \ 10^{14} \ Prime_{H \cdot E}(No \ \{63\})$$

$$[12]^{17} + \{12\} + 17 = 2.218611107 \ 10^{18} \ Prime_{H \cdot E}(No \ \{64\})$$

$$[12]^{59} + \{12\} + 59 = 4.695626196 \ 10^{63} \ Prime_{H \cdot E}(No \ \{65\})$$

$$[13]^{3} + \{13\} + 3 = 2213. \ Prime_{H \cdot E}(No \ \{66\})$$

$$[13]^{5} + \{13\} + 5 = 371311. \ Prime_{H \cdot E}(No \ \{67\})$$

$$[14] + \{14\} + 1 = 29. \ Prime_{H \cdot E}(No \ \{68\})$$

$$[14]^{9} + \{14\} + 9 = 2.066104681 \ 10^{10} \ Prime_{H \cdot E}(No \ \{69\})$$

$$[14]^{45} + \{14\} + 45 = 3.764970741 \ 10^{51} \ Prime_{H \cdot E}(No \ \{70\})$$

$$[15] + \{15\} + 1 = 31. \ Prime_{H \cdot E}(No \ \{71\})$$

$$[15]^{7} + \{15\} + 7 = 1.70859397 \ 10^{8} \ Prime_{H \cdot E}(No \ \{72\})$$

$$[16]^{11} + \{16\} + 11 = 1.759218604 \ 10^{13} \ Prime_{H \cdot E}(No \ \{73\})$$

$$[16]^{17} + \{16\} + 17 = 2.951479052 \ 10^{20} \ Prime_{H \cdot E}(No \ \{74\})$$

$$[17]^3 + \{17\} + 3 = 4933. \; Prime_{H \cdot E}(No \; \{75\})$$

$$[17]^7 + \{17\} + 7 = 4.10338697 \; 10^8 \; Prime_{H \cdot E}(No \; \{76\})$$

$$[18] + \{18\} + 1 = 37. \; Prime_{H \cdot E}(No \; \{77\})$$

$$[18]^{25} + \{18\} + 25 = 2.408865921 \; 10^{31} \; Prime_{H \cdot E}(No \; \{78\})$$

$$[19]^{11} + \{19\} + 11 = 1.164902589 \; 10^{14} \; Prime_{H \cdot E}(No \; \{79\})$$

$$[19]^{53} + \{19\} + 53 = 5.942112235 \; 10^{67} \; Prime_{H \cdot E}(No \; \{80\})$$

$$[20] + \{20\} + 1 = 41. \; Prime_{H \cdot E}(No \; \{81\})$$

$$[21] + \{21\} + 1 = 43. \; Prime_{H \cdot E}(No \; \{82\})$$

$$[21]^{65} + \{21\} + 65 = 8.795370887 \; 10^{85} \; Prime_{H \cdot E}(No \; \{83\})$$

$$[22]^{29} + \{22\} + 29 = 8.516433191 \; 10^{38} \; Prime_{H \cdot E}(No \; \{84\})$$

$$[23] + \{23\} + 1 = 47. \; Prime_{H \cdot E}(No \; \{85\})$$

$$[23]^7 + \{23\} + 7 = 3.404825477 \; 10^9 \; Prime_{H \cdot E}(No \; \{86\})$$

$$[23]^{37} + \{23\} + 37 = 2.420638479 \; 10^{50} \; Prime_{H \cdot E}(No \; \{87\})$$

$$[24]^{13} + \{24\} + 13 = 8.764883385 \; 10^{17} \; Prime_{H \cdot E}(No \; \{88\})$$

$$[25]^{27} + \{25\} + 27 = 5.551115123 \; 10^{37} \; Prime_{H \cdot E}(No \; \{89\})$$

$$[26] + \{26\} + 1 = 53. \; Prime_{H \cdot E}(No \; \{90\})$$

$$[26]^{61} + \{26\} + 61 = 2.057662895 \; 10^{86} \; Prime_{H \cdot E}(No \; \{91\})$$

$$[28]^{27} + \{28\} + 27 = 1.183768683 \; 10^{39} \; Prime_{H \cdot E}(No \; \{92\})$$

$$[29] + \{29\} + 1 = 59. \; Prime_{H \cdot E}(No \; \{93\})$$

$$[29]^3 + \{29\} + 3 = 24421. \ Prime_{H \bullet E}(No \ \{94\})$$

$$[29]^{79} + \{29\} + 79 = 3.384089450 \ 10^{115} \ Prime_{H \bullet E}(No \ \{95\})$$

$$[30] + \{30\} + 1 = 61. \ Prime_{H \bullet E}(No \ \{96\})$$

$$[30]^{11} + \{30\} + 11 = 1.771470000 \ 10^{16} \ Prime_{H \bullet E}(No \ \{97\})$$

$$[31]^5 + \{31\} + 5 = 2.8629187 \ 10^7 \ Prime_{H \bullet E}(No \ \{98\})$$

$$[31]^{15} + \{31\} + 15 = 2.346526199 \ 10^{22} \ Prime_{H \bullet E}(No \ \{99\})$$

$$[32]^3 + \{32\} + 3 = 32803. \ Prime_{H \bullet E}(No \ \{100\})$$

$$[32]^{31} + \{32\} + 31 = 4.567192617 \ 10^{46} \ Prime_{H \bullet E}(No \ \{101\})$$

$$[33] + \{33\} + 1 = 67. \ Prime_{H \bullet E}(No \ \{102\})$$

$$[34]^3 + \{34\} + 3 = 39341. \ Prime_{H \bullet E}(No \ \{103\})$$

$$[35] + \{35\} + 1 = 71. \ Prime_{H \bullet E}(No \ \{104\})$$

$$[35]^{87} + \{35\} + 87 = 2.157346272 \ 10^{134} \ Prime_{H \bullet E}(No \ \{105\})$$

$$[36] + \{36\} + 1 = 73. \ Prime_{H \bullet E}(No \ \{106\})$$

$$[38]^7 + \{38\} + 7 = 1.144155826 \ 10^{11} \ Prime_{H \bullet E}(No \ \{107\})$$

$$[38]^{27} + \{38\} + 27 = 4.509798197 \ 10^{42} \ Prime_{H \bullet E}(No \ \{108\})$$

$$[39] + \{39\} + 1 = 79. \ Prime_{H \bullet E}(No \ \{109\})$$

$$[39]^{11} + \{39\} + 11 = 3.174758373 \ 10^{17} \ Prime_{H \bullet E}(No \ \{110\})$$

$$[41] + \{41\} + 1 = 83. \ Prime_{H \bullet E}(No \ \{111\})$$

$$[41]^{31} + \{41\} + 31 = 9.915156154 \ 10^{49} \ Prime_{H \bullet E}(No \ \{112\})$$

$$[42]^5 + \{42\} + 5 = 1.30691279 \ 10^8 \ Prime_{H \bullet E}(No \ \{113\})$$

$$[42]^{11} + \{42\} + 11 = 7.173683211 \ 10^{17} \ Prime_{H \bullet E}(No \ \{114\})$$

$$[42]^{23} + \{42\} + 23 = 2.161392694 \ 10^{37} \ Prime_{H \bullet E}(No \ \{115\})$$

$$[44] + \{44\} + 1 = 89. \ Prime_{H \bullet E}(No \ \{116\})$$

$$[44]^{21} + \{44\} + 21 = 3.254664345 \ 10^{34} \ Prime_{H \bullet E}(No \ \{117\})$$

$$[45]^{67} + \{45\} + 67 = 5.824228738 \ 10^{110} \ Prime_{H \bullet E}(No \ \{118\})$$

$$[46]^{99} + \{46\} + 99 = 4.102280347 \ 10^{164} \ Prime_{H \bullet E}(No \ \{119\})$$

$$[48] + \{48\} + 1 = 97. \ Prime_{H \bullet E}(No \ \{120\})$$

$$[48]^5 + \{48\} + 5 = 2.54804021 \ 10^8 \ Prime_{H \bullet E}(No \ \{121\})$$

$$[48]^7 + \{48\} + 7 = 5.870683423 \ 10^{11} \ Prime_{H \bullet E}(No \ \{122\})$$

$$[49]^3 + \{49\} + 3 = 117701. \ Prime_{H \bullet E}(No \ \{123\})$$

$$[49]^9 + \{49\} + 9 = 1.628413598 \ 10^{15} \ Prime_{H \bullet E}(No \ \{124\})$$

$$[50] + \{50\} + 1 = 101. \ Prime_{H \bullet E}(No \ \{125\})$$

$$[50]^3 + \{50\} + 3 = 125053. \ Prime_{H \bullet E}(No \ \{126\})$$

$$[50]^9 + \{50\} + 9 = 1.953125000 \ 10^{15} \ Prime_{H \bullet E}(No \ \{127\})$$

$$[51] + \{51\} + 1 = 103. \ Prime_{H \bullet E}(No \ \{128\})$$

$$[52]^3 + \{52\} + 3 = 140663. \ Prime_{H \bullet E}(No \ \{129\})$$

$$[52]^5 + \{52\} + 5 = 3.80204089 \ 10^8 \ Prime_{H \bullet E}(No \ \{130\})$$

$$[53] + \{53\} + 1 = 107. \ Prime_{H \bullet E}(No \ \{131\})$$

$$[53]^3 + \{53\} + 3 = 148933. \; Prime_{H \bullet E}(No \; \{132\})$$

$$[53]^{33} + \{53\} + 33 = 7.963494727 \; 10^{56} \; Prime_{H \bullet E}(No \; \{133\})$$

$$[54] + \{54\} + 1 = 109. \; Prime_{H \bullet E}(No \; \{134\})$$

$$[54]^{23} + \{54\} + 23 = 6.999330098 \; 10^{39} \; Prime_{H \bullet E}(No \; \{135\})$$

$$[54]^{31} + \{54\} + 31 = 5.060652942 \; 10^{53} \; Prime_{H \bullet E}(No \; \{136\})$$

$$[56] + \{56\} + 1 = 113. \; Prime_{H \bullet E}(No \; \{137\})$$

$$[56]^{39} + \{56\} + 39 = 1.511238654 \; 10^{68} \; Prime_{H \bullet E}(No \; \{138\})$$

$$[58]^{11} + \{58\} + 11 = 2.498664400 \; 10^{19} \; Prime_{H \bullet E}(No \; \{139\})$$

$$[59]^3 + \{59\} + 3 = 205441. \; Prime_{H \bullet E}(No \; \{140\})$$

$$[60]^{79} + \{60\} + 79 = 2.978165171 \; 10^{140} \; Prime_{H \bullet E}(No \; \{141\})$$

$$[61]^{15} + \{61\} + 15 = 6.024867845 \; 10^{26} \; Prime_{H \bullet E}(No \; \{142\})$$

$$[63] + \{63\} + 1 = 127. \; Prime_{H \bullet E}(No \; \{143\})$$

$$[64]^{23} + \{64\} + 23 = 3.484491437 \; 10^{41} \; Prime_{H \bullet E}(No \; \{144\})$$

$$[65] + \{65\} + 1 = 131. \; Prime_{H \bullet E}(No \; \{145\})$$

$$[65]^3 + \{65\} + 3 = 274693. \; Prime_{H \bullet E}(No \; \{146\})$$

$$[65]^{67} + \{65\} + 67 = 2.918736540 \; 10^{121} \; Prime_{H \bullet E}(No \; \{147\})$$

$$[68] + \{68\} + 1 = 137. \; Prime_{H \bullet E}(No \; \{148\})$$

$$[69] + \{69\} + 1 = 139. \; Prime_{H \bullet E}(No \; \{149\})$$

$$[69]^5 + \{69\} + 5 = 1.564031423 \; 10^9 \; Prime_{H \bullet E}(No \; \{150\})$$

$$[70]^3 + \{70\} + 3 = 343073. \; Prime_{H \bullet E}(No \; \{151\})$$

$$[70]^{11} + \{70\} + 11 = 1.977326743 \; 10^{20} \; Prime_{H \bullet E}(No \; \{152\})$$

$$[71]^{15} + \{71\} + 15 = 5.873205959 \; 10^{27} \; Prime_{H \bullet E}(No \; \{153\})$$

$$[71]^{21} + \{71\} + 21 = 7.523593509 \; 10^{38} \; Prime_{H \bullet E}(No \; \{154\})$$

$$[71]^{27} + \{71\} + 27 = 9.637744646 \; 10^{49} \; Prime_{H \bullet E}(No \; \{155\})$$

$$[72]^{11} + \{72\} + 11 = 2.695612495 \; 10^{20} \; Prime_{H \bullet E}(No \; \{156\})$$

$$[73]^{51} + \{73\} + 51 = 1.070202266 \; 10^{95} \; Prime_{H \bullet E}(No \; \{157\})$$

$$[74] + \{74\} + 1 = 149. \; Prime_{H \bullet E}(No \; \{158\})$$

$$[75] + \{75\} + 1 = 151. \; Prime_{H \bullet E}(No \; \{159\})$$

$$[76]^{15} + \{76\} + 15 = 1.630061103 \; 10^{28} \; Prime_{H \bullet E}(No \; \{160\})$$

$$[77]^3 + \{77\} + 3 = 456613. \; Prime_{H \bullet E}(No \; \{161\})$$

$$[78] + \{78\} + 1 = 157. \; Prime_{H \bullet E}(No \; \{162\})$$

$$[79]^3 + \{79\} + 3 = 493121. \; Prime_{H \bullet E}(No \; \{163\})$$

$$[81] + \{81\} + 1 = 163. \; Prime_{H \bullet E}(No \; \{164\})$$

$$[81]^{35} + \{81\} + 35 = 6.265787482 \; 10^{66} \; Prime_{H \bullet E}(No \; \{165\})$$

$$[83] + \{83\} + 1 = 167. \; Prime_{H \bullet E}(No \; \{166\})$$

$$[83]^3 + \{83\} + 3 = 571873. \; Prime_{H \bullet E}(No \; \{167\})$$

$$[83]^7 + \{83\} + 7 = 2.713605099 \; 10^{13} \; Prime_{H \bullet E}(No \; \{168\})$$

$$[83]^{13} + \{83\} + 13 = 8.871870642 \; 10^{24} \; Prime_{H \bullet E}(No \; \{169\})$$

$$[83]^{31} + \{83\} + 31 = 3.100422384 \ 10^{59} \ Prime_{H \cdot E}(No \ \{170\})$$

$$[85]^{23} + \{85\} + 23 = 2.380319703 \ 10^{44} \ Prime_{H \cdot E}(No \ \{171\})$$

$$[85]^{81} + \{85\} + 81 = 1.918372689 \ 10^{156} \ Prime_{H \cdot E}(No \ \{172\})$$

$$[86] + \{86\} + 1 = 173. \ Prime_{H \cdot E}(No \ \{173\})$$

$$[88]^{3} + \{88\} + 3 = 681563. \ Prime_{H \cdot E}(No \ \{174\})$$

$$[88]^{53} + \{88\} + 53 = 1.141777877 \ 10^{103} \ Prime_{H \cdot E}(No \ \{175\})$$

$$[89] + \{89\} + 1 = 179. \ Prime_{H \cdot E}(No \ \{176\})$$

$$[90] + \{90\} + 1 = 181. \ Prime_{H \cdot E}(No \ \{177\})$$

$$[90]^{19} + \{90\} + 19 = 1.350851718 \ 10^{37} \ Prime_{H \cdot E}(No \ \{178\})$$

$$[91]^{9} + \{91\} + 9 = 4.279298001 \ 10^{17} \ Prime_{H \cdot E}(No \ \{179\})$$

$$[93]^{11} + \{93\} + 11 = 4.501035457 \ 10^{21} \ Prime_{H \cdot E}(No \ \{180\})$$

$$[95] + \{95\} + 1 = 191. \ Prime_{H \cdot E}(No \ \{181\})$$

$$[96] + \{96\} + 1 = 193. \ Prime_{H \cdot E}(No \ \{182\})$$

$$[96]^{37} + \{96\} + 37 = 2.208185849 \ 10^{73} \ Prime_{H \cdot E}(No \ \{183\})$$

$$[97]^{3} + \{97\} + 3 = 912773. \ Prime_{H \cdot E}(No \ \{184\})$$

$$[97]^{57} + \{97\} + 57 = 1.761930823 \ 10^{113} \ Prime_{H \cdot E}(No \ \{185\})$$

$$[98] + \{98\} + 1 = 197. \ Prime_{H \cdot E}(No \ \{186\})$$

$$[99] + \{99\} + 1 = 199. \ Prime_{H \cdot E}(No \ \{187\})$$

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