

[PHOTO: Recording initiated Wed 21-Nov-84 3:59PM]

CMU Tops-20 Command Processor 5.1(1517)-2
@macsyms

This is MACSYMA 297
Loading fix file PS:<MACSYM>TOPS20.FIX.297

(C1) loadfile(dm21);

DM21 1 1 PS DM2W being loaded
Loading done

(D1) DONE

(C2) dispfun(e);

$$(D2) \quad E := \text{RATSIMP}\left(E \frac{E^3 + E}{K-1} - \frac{B}{K-1}\right)$$

(C3) dispfun(b);

$$(D3) \quad B := \text{RATSIMP}\left(1 + \frac{E^2}{K} + \frac{E^2}{K} + \frac{E^2}{K} + \frac{E^2}{K-1} + \frac{E^2}{K-1}\right)$$

(C4) e[5]\$

(C5) e[0];

$$(D5) \quad E$$

(C6) e[1];

$$(D6) \quad -E^3$$

(C7) e[2];

$$(D7) \quad \frac{E^7 - E^5}{E^6 - E^4 + E^2 + 1}$$

(C8) e[3];

$$(D8) \quad \frac{E^{19} - 3E^{17} + 4E^{15} - E^{13} - E^{11}}{E^{18} - 3E^{16} + 6E^{14} - 3E^{12} - 2E^{10} + 6E^8 + E^6 - E^4 + 2E^2 + 1}$$

(C9) e[4];

$$(D9) \quad \frac{(2E^{51} - 16E^{49} + 63E^{47} - 150E^{45} + 225E^{43} - 191E^{41} + 31E^{39} + 116E^{37} - 110E^{35} + 3E^{33} + 51E^{31} - 25E^{29} - 5E^{27} + 8E^{25} - E^{23} - E^{21})}{(3E^{50} - 23E^{48} + 91E^{46} - 216E^{44} + 313E^{42} - 201E^{40} - 151E^{38} + 428E^{36})}$$

34 32 30 28 26 24 22 20
- 208 E - 331 E + 517 E - 25 E - 447 E + 339 E + 172 E - 287 E

18 16 14 12 10 8 6 4 2
+ 88 E + 169 E - 63 E - 5 E + 65 E + 14 E - 2 E + 9 E + 6 E + 1)

(C10) e[5];

139 137 135 133 131 129
(D10) (10 E - 218 E + 2373 E - 16991 E + 89114 E - 361519 E

127 125 123 121 119
+ 1168627 E - 3054443 E + 6470106 E - 10973262 E + 14344675 E

117 115 113 111 109
- 12927321 E + 4369344 E + 8473813 E - 16932826 E + 12795617 E

107 105 103 101 99
+ 2358274 E - 15500596 E + 13778948 E + 1049137 E - 13176985 E

97 95 93 91 89
+ 10230953 E + 2678296 E - 10123204 E + 5318030 E + 3582301 E

87 85 83 81 79
- 5972108 E + 1454619 E + 2731482 E - 2370644 E - 175528 E

77 75 73 71 69 67
+ 1262668 E - 520509 E - 310412 E + 337379 E - 15758 E - 109827 E

65 63 61 59 57 55 53
+ 40924 E + 19621 E - 16053 E - 966 E + 3691 E - 419 E - 582 E

51 49 47 45 43
+ 120 E + 73 E - 14 E - 9 E - E)

138 136 134 132 130 128
/(19 E - 401 E + 4257 E - 29807 E + 152840 E - 604253 E

126 124 122 120 118
+ 1890324 E - 4721471 E + 9343274 E - 14165145 E + 14890751 E

116 114 112 110 108
- 6776948 E - 8937644 E + 19953638 E - 10095631 E - 19341515 E

106 104 102 100 98
+ 36439159 E - 4995358 E - 59644772 E + 77531700 E + 10589791 E

96 94 92 90 88
- 134923931 E + 131772682 E + 52552126 E - 231010425 E + 158460776 E

86 84 82 80
+ 132861021 E - 304196834 E + 116600191 E + 225692772 E

78 76 74 72 70
- 300169294 E + 12982867 E + 270816563 E - 207065076 E - 88546879 E

68 66 64 62 60
+ 230756143 E - 79669483 E - 125415903 E + 134552027 E + 9435903 E

58 56 54 52 50

$$\begin{aligned}
& - 95585518 E + 46401667 E + 35212687 E - 44939970 E + 2317971 E \\
& \quad \quad \quad 48 \quad \quad \quad 46 \quad \quad \quad 44 \quad \quad \quad 42 \quad \quad \quad 40 \\
& + 23893563 E - 11438715 E - 6509553 E + 8616051 E + 45199 E \\
& \quad \quad \quad 38 \quad \quad \quad 36 \quad \quad \quad 34 \quad \quad \quad 32 \quad \quad \quad 30 \\
& - 3342908 E + 1542416 E + 1132640 E - 660314 E + 15253 E \\
& \quad \quad \quad 28 \quad \quad \quad 26 \quad \quad \quad 24 \quad \quad \quad 22 \quad \quad \quad 20 \quad \quad \quad 18 \\
& + 395842 E + 27889 E - 29520 E + 65829 E + 40588 E + 5294 E \\
& \quad \quad \quad 16 \quad \quad \quad 14 \quad \quad \quad 12 \quad \quad \quad 10 \quad \quad \quad 8 \quad \quad \quad 6 \quad \quad \quad 4 \quad \quad \quad 2 \\
& + 6883 E + 7842 E + 3145 E + 924 E + 602 E + 342 E + 104 E + 16 E \\
& + 1)
\end{aligned}$$

(C11) b[0];

(D11) 1

(C12) b[1];

(D12) $E^6 - E^4 + E^2 + 1$

(C13) b[2];

(D13)
$$\begin{aligned}
& E^{18} - 3 E^{16} + 6 E^{14} - 3 E^{12} - 2 E^{10} + 6 E^8 + E^6 - E^4 + 2 E^2 + 1 \\
& \text{-----} \\
& E^{12} - 2 E^{10} + 3 E^8 - E^4 + 2 E^2 + 1
\end{aligned}$$

(C14) b[3];

(D14)
$$\begin{aligned}
& (3 E^{50} - 23 E^{48} + 91 E^{46} - 216 E^{44} + 313 E^{42} - 201 E^{40} - 151 E^{38} \\
& + 428 E^{36} - 208 E^{34} - 331 E^{32} + 517 E^{30} - 25 E^{28} - 447 E^{26} + 339 E^{24} + 172 E^{22} \\
& - 287 E^{20} + 88 E^{18} + 169 E^{16} - 63 E^{14} - 5 E^{12} + 65 E^{10} + 14 E^8 - 2 E^6 + 9 E^4 \\
& + 6 E^2 + 1) / (E^2 - 8 E^{48} + 36 E^{46} - 102 E^{44} + 196 E^{42} - 230 E^{40} + 93 E^{38} \\
& + 216 E^{34} - 422 E^{32} + 266 E^{30} + 205 E^{28} - 438 E^{26} + 224 E^{24} + 224 E^{22} \\
& - 264 E^{20} + 62 E^{18} + 170 E^{16} - 58 E^{14} - 7 E^{12} + 64 E^{10} + 14 E^8 - 2 E^6 + 9 E^4 \\
& + 6 E^2 + 1)
\end{aligned}$$

(C15) b[4];

(D15)
$$\begin{aligned}
& (19 E^{138} - 401 E^{136} + 4257 E^{134} - 29807 E^{132} + 152840 E^{130} - 604253 E^{128} \\
& + 1890324 E^{126} - 4721471 E^{124} + 9343274 E^{122} - 14165145 E^{120} + 14890751 E^{118} \\
& + 116 E^{116} - 114 E^{114} + 112 E^{112} - 110 E^{110} + 108 E^{108}
\end{aligned}$$

- 6776948 E	- 8937644 E	+ 19953638 E	- 10095631 E	- 19341515 E					
	106	104	102	100					98
+ 36439159 E	- 4995358 E	- 59644772 E	+ 77531700 E	+ 10589791 E					
	96	94	92	90					88
- 134923931 E	+ 131772682 E	+ 52552126 E	- 231010425 E	+ 158460776 E					
	86	84	82	80					
+ 132861021 E	- 304196834 E	+ 116600191 E	+ 225692772 E						
	78	76	74	72					70
- 300169294 E	+ 12982867 E	+ 270816563 E	- 207065076 E	- 88546879 E					
	68	66	64	62					60
+ 230756143 E	- 79669483 E	- 125415903 E	+ 134552027 E	+ 9435903 E					
	58	56	54	52					50
- 95585518 E	+ 46401667 E	+ 35212687 E	- 44939970 E	+ 2317971 E					
	48	46	44	42					40
+ 23893563 E	- 11438715 E	- 6509553 E	+ 8616051 E	+ 45199 E					
	38	36	34	32					30
- 3342908 E	+ 1542416 E	+ 1132640 E	- 660314 E	+ 15253 E					
	28	26	24	22					18
+ 395842 E	+ 27889 E	- 29520 E	+ 65829 E	+ 40588 E	+ 5294 E				
	16	14	12	10	8	6	4		2
+ 6883 E	+ 7842 E	+ 3145 E	+ 924 E	+ 602 E	+ 342 E	+ 104 E	+ 16 E		
	136	134	132	130	128				126
+ 1)/(9 E	- 192 E	+ 2092 E	- 15208 E	+ 81808 E	- 342766 E				
	124	122	120	118					116
+ 1148662 E	- 3110836 E	+ 6775042 E	- 11539492 E	+ 14124853 E					
	114	112	110	108					106
- 8568220 E	- 9275753 E	+ 32971592 E	- 41094736 E	+ 10626280 E					
	104	102	100	98					96
+ 52018979 E	- 93078198 E	+ 48099628 E	+ 75994996 E	- 164250234 E					
	94	92	90	88					86
+ 90222314 E	+ 116562587 E	- 242159770 E	+ 107527297 E	+ 180122644 E					
	84	82	80	78					76
- 293531045 E	+ 70287818 E	+ 247277553 E	- 278386224 E	- 15851442 E					
	74	72	70	68					66
+ 272322126 E	- 188708250 E	- 99334692 E	+ 225200499 E	- 70718762 E					
	64	62	60	58					56
- 126603092 E	+ 130439202 E	+ 11788891 E	- 94627232 E	+ 44994663 E					
	54	52	50	48					46
+ 35327152 E	- 44425708 E	+ 2112568 E	+ 23776087 E	- 11340006 E					
	44	42	40	38					36

- 6498199 E + 8585234 E + 47648 E - 3336288 E + 1540541 E
+ 1131098 E - 660125 E + 15342 E + 395716 E + 27818 E - 29534 E
+ 65828 E + 40588 E + 5294 E + 6883 E + 7842 E + 3145 E + 924 E
+ 602 E + 342 E + 104 E + 16 E + 1)

(C16) quit();
@pop

[PHOTO: Recording terminated Wed 21-Nov-84 4:04PM]