

HP-41C LR Degree 8 Processing by R. M. Eades
PPC Calculator Journal V8 N4 Pg 24 June 1981
Updated with suggestions from PPC V8N6P2 NOP

```
01 LBL "1"      ;L.R. Degree 8 Initialize (A)
02 CF 06
03 "FIX X?"     ;Number decimal places for X
04 PROMPT
05 STO 46
06 "FIX Y?"     ;Number decimal places for Y
07 PROMPT
08 STO 43
09 "DEGREES?"   ;Number of polynomials <= 8
10 PROMPT
11 STO 93
12 CF 05
13 48
14 STO 47
15 CLX
16 LBL 11
17 STO 23
18 STO 09
19 STO 25
20 RCL 40
21 STO 10
22 RCL 41
23 STO 24
24 LBL 79
25 CLX
26 STO 01
27 STO 02
28 STO 03
29 STO 04
30 STO 05
31 STO 06
32 STO 07
33 STO 08
34 FS?C 04
35 RTN
36 FS?C 06
37 RTN
38 RCL 23
39 0
40 X=Y?
41 GTO 12
42 RCL 32
43 STO 11
44 RCL 23
45 1
46 X=Y?
47 GTO 12
48 1
49 XEQ 07
50 RCL 33
51 *
52 ST+ 10
53 1
54 XEQ 08
55 RCL 33
56 *
57 STO 12
58 RCL 23
59 2
60 X=Y?
61 GTO 12
62 1
63 XEQ 07
64 2
65 XEQ 08
66 *
```

67 2
68 XEQ 07
69 +
70 STO 20
71 RCL 34
72 *
73 ST+ 11
74 XEQ 02
75 RCL 34
76 *
77 STO 13
78 RCL 23
79 3
80 X=Y?
81 GTO 12
82 XEQ 09
83 RCL 35
84 *
85 ST+ 10
86 RCL 20
87 XEQ 13
88 STO 22
89 1
90 XEQ 08
91 XEQ 14
92 RCL 22
93 +
94 RCL 35
95 *
96 ST+ 12
97 XEQ 02
98 XEQ 13
99 RCL 35
100 *
101 STO 14
102 RCL 23
103 4
104 X=Y?
105 GTO 12
106 RCL 20
107 XEQ 16
108 STO 22
109 XEQ 04
110 RCL 36
111 *
112 ST+ 11
113 RCL 20
114 XEQ 13
115 STO 22
116 1
117 XEQ 08
118 XEQ 14
119 RCL 22
120 +
121 XEQ 18
122 STO 22
123 XEQ 10
124 RCL 22
125 +
126 RCL 36
127 *
128 ST+ 13
129 XEQ 05
130 RCL 36
131 *
132 STO 15
133 RCL 23
134 5
135 X=Y?
136 GTO 12

137 XEQ 09
138 XEQ 22
139 RCL 37
140 *
141 ST+ 10
142 RCL 20
143 XEQ 03
144 XEQ 22
145 STO 22
146 RCL 20
147 XEQ 16
148 STO 21
149 XEQ 09
150 XEQ 19
151 XEQ 20
152 RCL 22
153 +
154 RCL 37
155 *
156 ST+ 12
157 RCL 20
158 XEQ 03
159 XEQ 18
160 STO 22
161 XEQ 02
162 XEQ 15
163 XEQ 20
164 STO 22
165 XEQ 06
166 RCL 37
167 *
168 ST+ 14
169 XEQ 05
170 XEQ 20
171 RCL 37
172 *
173 STO 16
174 RCL 23
175 6
176 X=Y?
177 GTO 12
178 RCL 20
179 XEQ 16
180 STO 22
181 XEQ 04
182 XEQ 24
183 STO 22
184 XEQ 09
185 XEQ 22
186 XEQ 23
187 RCL 22
188 +
189 RCL 38
190 *
191 ST+ 11
192 RCL 20
193 XEQ 16
194 STO 22
195 XEQ 04
196 XEQ 20
197 STO 22
198 RCL 20
199 XEQ 31
200 XEQ 21
201 XEQ 23
202 STO 22
203 RCL 20
204 XEQ 31
205 XEQ 18
206 STO 21

207 XEQ 10
208 RCL 21
209 +
210 XEQ 25
211 RCL 38
212 *
213 ST+ 13
214 RCL 20
215 XEQ 03
216 XEQ 18
217 STO 22
218 XEQ 02
219 XEQ 15
220 XEQ 20
221 STO 22
222 XEQ 06
223 XEQ 23
224 STO 22
225 XEQ 05
226 XEQ 25
227 RCL 38
228 *
229 ST+ 15
230 XEQ 05
231 XEQ 20
232 XEQ 23
233 RCL 38
234 *
235 STO 17
236 RCL 23
237 7
238 X=Y?
239 GTO 12
240 XEQ 09
241 XEQ 22
242 XEQ 28
243 RCL 39
244 *
245 ST+ 10
246 RCL 20
247 XEQ 16
248 STO 22
249 XEQ 04
250 XEQ 20
251 STO 22
252 RCL 20
253 XEQ 31
254 XEQ 21
255 XEQ 28
256 STO 22
257 RCL 20
258 XEQ 16
259 STO 21
260 XEQ 09
261 XEQ 19
262 XEQ 24
263 STO 21
264 XEQ 09
265 XEQ 22
266 XEQ 23
267 RCL 21
268 +
269 XEQ 26
270 RCL 22
271 +
272 RCL 39
273 *
274 ST+ 12
275 RCL 20
276 XEQ 16

277 STO 22
278 XEQ 04
279 XEQ 20
280 STO 22
281 RCL 20
282 XEQ 31
283 XEQ 21
284 XEQ 23
285 STO 22
286 RCL 20
287 XEQ 31
288 XEQ 18
289 STO 21
290 XEQ 02
291 XEQ 16
292 RCL 21
293 +
294 XEQ 25
295 XEQ 26
296 STO 22
297 RCL 20
298 XEQ 31
299 XEQ 18
300 STO 21
301 XEQ 10
302 RCL 21
303 +
304 XEQ 20
305 STO 21
306 XEQ 02
307 XEQ 13
308 XEQ 22
309 RCL 21
310 +
311 XEQ 27
312 RCL 39
313 *
314 ST+ 14
315 RCL 20
316 XEQ 03
317 XEQ 18
318 STO 22
319 XEQ 02
320 XEQ 15
321 XEQ 20
322 STO 22
323 XEQ 06
324 XEQ 23
325 STO 22
326 XEQ 05
327 XEQ 25
328 XEQ 26
329 STO 22
330 XEQ 05
331 XEQ 20
332 XEQ 27
333 RCL 39
334 *
335 ST+ 16
336 XEQ 05
337 XEQ 20
338 XEQ 23
339 XEQ 26
340 RCL 39
341 *
342 STO 18
343 LBL 12
344 RCL 30
345 RCL 31
346 +

```

347 RCL 30
348 RCL 31
349 -
350 /
351 STO 21
352 2
353 RCL 31
354 RCL 30
355 -
356 /
357 STO 20
358 1
359 STO 19
360 STO 24
361 CLST
362 STO 22
363 STO 27
364 STO 25
365 10
366 STO 26
367 STO 29
368 LBL 41
369 XEQ 35
370 RCL IND 26
371 *
372 RCL 24
373 *
374 RCL 27
375 +
376 STO 27
377 RCL 23
378 RCL 25
379 X=Y?
380 GTO 32
381 RDN
382 RDN
383 ISG 26
384 "" ;F0=null string (NOP)
385 ISG 25
386 "" ;F0=null string (NOP)
387 XEQ 34
388 GTO 41
389 LBL 32
390 RDN
391 RDN
392 RCL 19
393 *
394 STO 28
395 RCL 22
396 STO 25
397 ISG 29
398 "" ;F0=null string (NOP)
399 RCL 29
400 STO 26
401 RCL 28
402 FIX IND 43
403 STO IND 25
404 STO IND 47
405 ISG 47
406 "" ;F0=null string (NOP)
407 ISG 25
408 "" ;F0=null string (NOP)
409 XEQ 33
410 RCL 23
411 RCL 22
412 X=Y?
413 GTO 37
414 1
415 STO 24
416 +

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417 STO 22
418 STO 25
419 CLST
420 STO 27
421 GTO 41
422 LBL 33
423 RCL 19
424 RCL 20
425 *
426 STO 19
427 RDN
428 RTN
429 LBL 34
430 RCL 24
431 RCL 21
432 *
433 STO 24
434 RCL 27
435 RTN
436 LBL 35
437 RCL 25
438 FACT
439 RCL 22
440 FACT
441 /
442 RCL 25
443 RCL 22
444 -
445 FACT
446 /
447 RTN
448 LBL 00
449 1
450 XEQ 07
451 3
452 XEQ 07
453 RTN
454 LBL 01
455 1
456 XEQ 08
457 3
458 XEQ 07
459 *
460 RTN
461 LBL 02
462 1
463 XEQ 08
464 2
465 XEQ 08
466 *
467 RTN
468 LBL 03
469 3
470 XEQ 08
471 *
472 STO 22
473 XEQ 01
474 RCL 22
475 +
476 RTN
477 LBL 04
478 XEQ 00
479 *
480 XEQ 17
481 RTN
482 LBL 05
483 XEQ 02
484 XEQ 13
485 XEQ 18
486 RTN

487 LBL 06
488 XEQ 02
489 XEQ 13
490 XEQ 21
491 RTN
492 LBL 07
493 STO 25
494 1
495 +
496 RCL 24
497 RCL 25
498 -
499 *
500 RCL 24
501 RCL 25
502 +
503 1
504 +
505 RCL 25
506 SF 25
507 *
508 X<>Y
509 /
510 CHS
511 RTN
512 LBL 08
513 STO 25
514 1
515 +
516 RCL 24
517 RCL 25
518 -
519 *
520 RCL 25
521 2
522 *
523 1
524 +
525 RCL 24
526 *
527 X<>Y
528 SF 25
529 /
530 RTN
531 LBL 09
532 XEQ 00
533 *
534 RTN
535 LBL 10
536 XEQ 02
537 XEQ 16
538 RTN
539 LBL 31
540 3
541 XEQ 08
542 *
543 STO 21
544 XEQ 01
545 RCL 21
546 +
547 RTN
548 LBL 13
549 3
550 XEQ 08
551 *
552 RTN
553 LBL 14
554 3
555 XEQ 07
556 *

557 RTN
558 LBL 15
559 4
560 XEQ 07
561 *
562 RCL 22
563 +
564 RTN
565 LBL 16
566 4
567 XEQ 07
568 *
569 RTN
570 LBL 17
571 4
572 XEQ 08
573 *
574 RCL 22
575 +
576 RTN
577 LBL 18
578 4
579 XEQ 08
580 *
581 RTN
582 LBL 19
583 4
584 XEQ 08
585 *
586 RCL 21
587 +
588 RTN
589 LBL 20
590 5
591 XEQ 08
592 *
593 RTN
594 LBL 21
595 5
596 XEQ 07
597 *
598 RCL 22
599 +
600 RTN
601 LBL 22
602 5
603 XEQ 07
604 *
605 RTN
606 LBL 23
607 6
608 XEQ 08
609 *
610 RTN
611 LBL 24
612 6
613 XEQ 07
614 *
615 RTN
616 LBL 25
617 6
618 XEQ 07
619 *
620 RCL 22
621 +
622 RTN
623 LBL 26
624 7
625 XEQ 08
626 *

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627 RTN
628 LBL 27
629 7
630 XEQ 07
631 *
632 RCL 22
633 +
634 RTN
635 LBL 28
636 7
637 XEQ 07
638 *
639 RTN
640 LBL "2"      ;Display degree selected (B)
641 FIX 0
642 "DEGREE "
643 ARCL 27
644 FS? 10
645 GTO 78
646 PROMPT
647 LBL 78
648 XROM 29,08 ;PRA
649 ADV
650 RTN
651 LBL "12"     ;Compute and print y-bar given x (c)
652 SF 09
653 CF 08
654 CF 10
655 GTO 36
656 LBL "3"     ;Compute & display y-bar given x (C)
657 SF 08
658 CF 06
659 CF 10
660 LBL 36
661 STO 18
662 ENTER
663 ENTER
664 ENTER
665 FIX IND 43
666 RCL 08
667 *
668 RCL 07
669 +
670 *
671 RCL 06
672 +
673 *
674 RCL 05
675 +
676 *
677 RCL 04
678 +
679 *
680 RCL 03
681 +
682 *
683 RCL 02
684 +
685 *
686 RCL 01
687 +
688 *
689 RCL 00
690 +
691 STO 15
692 STO 17
693 FIX IND 46
694 CLA
695 "X"
696 ARCL 18

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697 >="Y,"
698 FIX IND 43
699 FS? 10
700 GTO 77
701 ARCL 17
702 FS? 08
703 PROMPT
704 FS? 09
705 GTO 78
706 LBL 77
707 CLA
708 ARCL 17
709 FS? 08
710 PROMPT
711 LBL 78
712 XROM 29,08 ;PRA
713 ADV
714 FS?C 09
715 RTN
716 FS? 06
717 GTO 53
718 GTO "3" ;Compute y-bar given x (Line 656)
719 LBL 53
720 RCL 18
721 RCL 30
722 X<=Y?
723 GTO 56
724 RCL 18
725 RCL 42
726 +
727 STO 18
728 GTO 36
729 LBL 56
730 RCL 26
731 RCL 28
732 X=Y?
733 GTO 47
734 1
735 ST+ 28
736 RCL 28
737 STO 27
738 STO 11
739 GTO 51
740 LBL "10" ;End of processing
741 FS? 06
742 GTO 52
743 LBL 47
744 BEEP
745 "COMPLETED"
746 PROMPT
747 LBL 52
748 RCL 31
749 STO 18
750 XEQ 36
751 LBL 37
752 RCL 23
753 RCL 93
754 X=Y?
755 GTO 47
756 ISG 23
757 "" ;F0=null string (NOP)
758 RCL 23
759 GTO 11
760 LBL "5" ;Enter degree of polynomial (E)
761 CF 06
762 CF 04
763 LBL 51
764 FS? 06
765 XEQ "2" ;Display degree selected (Line 640)
766 STO 11

```

```

767 STO 27
768 SF 04
769 XEQ 79
770 STO 09
771 STO 14
772 48
773 STO 10
774 LBL "6"      ;Totaling loop 6
775 RCL 11
776 RCL 09
777 X=Y?
778 GTO "8"      ;Continuation point 8 (Line 784)
779 ISG 09
780 ""           ;F0=null string (NOP)
781 RCL 09
782 ST+ 10
783 GTO "6"      ;Totaling loop 6 (Line 774)
784 LBL "8"      ;Continuation point 8
785 RCL 10
786 RCL 11
787 +
788 STO 12
789 ISG 12
790 ""           ;F0=null string (NOP)
791 LBL "9"      ;Register move loop 9
792 RCL IND 10
793 STO IND 14
794 ISG 10
795 ""           ;F0=null string (NOP)
796 ISG 14
797 ""           ;F0=null string (NOP)
798 RCL 10
799 RCL 12
800 X=Y?
801 GTO "10"     ;End of processing (Line 740)
802 GTO "9"      ;Register move loop 9 (Line 791)
803 LBL "4"      ;Estimate accuracy of fit (D)
804 CF 08
805 SF 10
806 SF 06
807 STO 26
808 STOP
809 STO 28
810 STO 27
811 STO 11
812 GTO 51
813 END

```

0622C000F20031A906F646495820583F8E912EF64649582059
3F8E912BF8444547524545533F8E915DA9051418912F770C91
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12E00007409114902242920BE000029022423D90171378BD00
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Program Registers Needed: 225

Row 1 (1 - 3)



Row 2 (3 - 8)



Row 3 (8 - 11)



Row 4 (12 - 19)



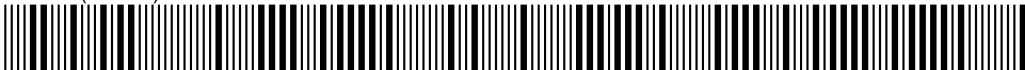
Row 5 (20 - 28)



Row 6 (29 - 38)



Row 7 (39 - 47)



Row 8 (48 - 54)



Row 9 (55 - 63)



Row 10 (63 - 70)



Row 11 (71 - 78)



Row 12 (78 - 85)



Row 13 (86 - 91)



Row 14 (91 - 98)



Row 15 (98 - 106)

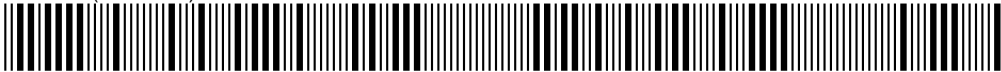


Row 16 (106 - 112)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

Row 17 (112 - 118)



Row 18 (118 - 123)



Row 19 (124 - 130)



Row 20 (131 - 138)



Row 21 (138 - 144)



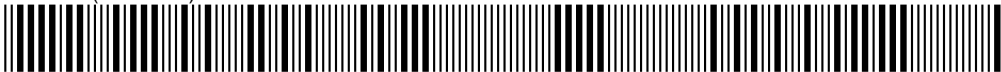
Row 22 (144 - 149)



Row 23 (150 - 156)



Row 24 (156 - 161)



Row 25 (161 - 166)



Row 26 (166 - 172)



Row 27 (173 - 179)



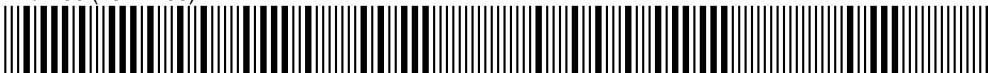
Row 28 (180 - 184)



Row 29 (185 - 191)



Row 30 (191 - 196)



Row 31 (196 - 201)



Row 32 (201 - 206)

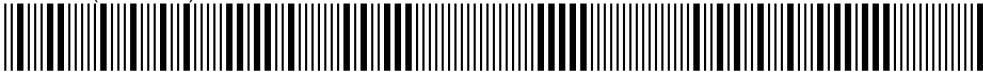


Row 33 (207 - 213)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

Row 34 (213 - 218)



Row 35 (218 - 223)



Row 36 (223 - 228)



Row 37 (229 - 233)



Row 38 (234 - 241)



Row 39 (241 - 247)



Row 40 (247 - 252)



Row 41 (252 - 257)



Row 42 (257 - 262)



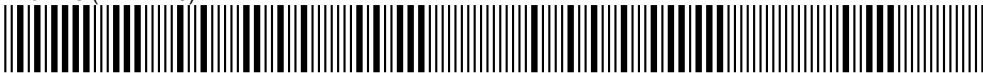
Row 43 (262 - 266)



Row 44 (267 - 274)



Row 45 (274 - 279)



Row 46 (279 - 284)



Row 47 (284 - 289)



Row 48 (290 - 295)



Row 49 (295 - 300)

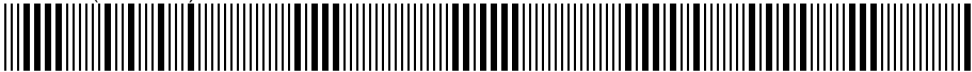


Row 50 (300 - 306)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

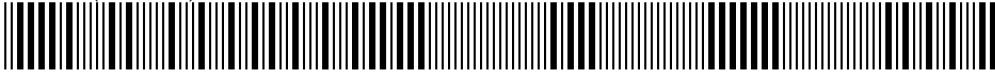
Row 51 (306 - 311)



Row 52 (311 - 317)



Row 53 (317 - 322)



Row 54 (322 - 327)



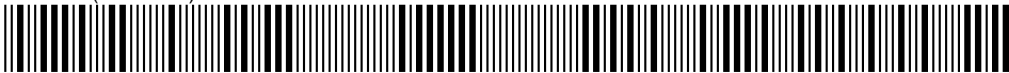
Row 55 (327 - 331)



Row 56 (332 - 337)



Row 57 (337 - 343)



Row 58 (344 - 351)



Row 59 (352 - 360)



Row 60 (360 - 367)



Row 61 (367 - 374)



Row 62 (374 - 381)



Row 63 (382 - 388)



Row 64 (389 - 396)



Row 65 (397 - 403)



Row 66 (404 - 410)



Row 67 (411 - 418)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

Row 68 (418 - 424)



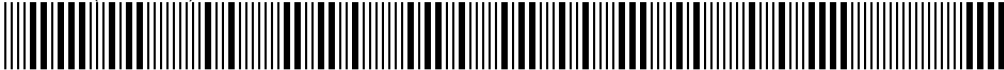
Row 69 (425 - 433)



Row 70 (433 - 441)



Row 71 (442 - 450)



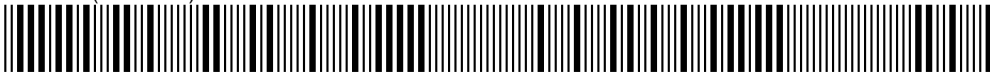
Row 72 (451 - 458)



Row 73 (458 - 466)



Row 74 (467 - 474)



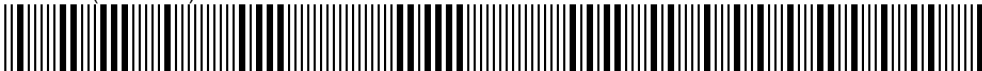
Row 75 (474 - 482)



Row 76 (483 - 488)



Row 77 (488 - 495)



Row 78 (496 - 504)



Row 79 (505 - 514)



Row 80 (515 - 524)



Row 81 (525 - 533)



Row 82 (534 - 541)



Row 83 (541 - 548)

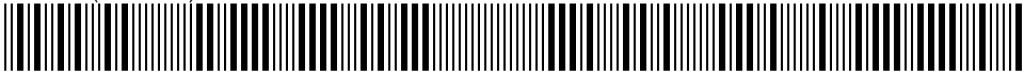


Row 84 (549 - 557)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

Row 85 (558 - 565)



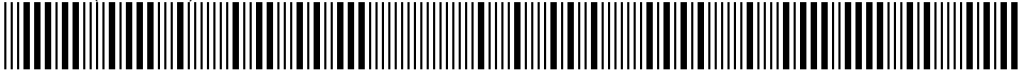
Row 86 (566 - 573)



Row 87 (574 - 582)



Row 88 (582 - 590)



Row 89 (591 - 598)



Row 90 (598 - 606)



Row 91 (607 - 614)



Row 92 (615 - 623)



Row 93 (623 - 630)



Row 94 (631 - 639)



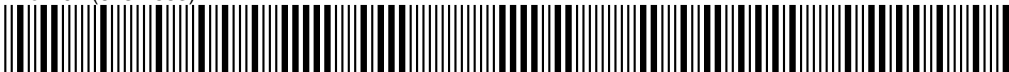
Row 95 (640 - 642)



Row 96 (642 - 648)



Row 97 (648 - 653)



Row 98 (654 - 658)



Row 99 (658 - 666)



Row 100 (667 - 679)



Row 101 (680 - 692)



HP-41C LR Degree 8 Processing by R. M. Eades PPC V8 N6 P24 June 1981

Row 102 (692 - 697)



Row 103 (698 - 704)



Row 104 (704 - 711)



Row 105 (711 - 718)



Row 106 (718 - 724)



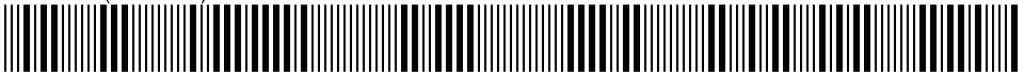
Row 107 (724 - 730)



Row 108 (731 - 737)



Row 109 (738 - 742)



Row 110 (742 - 745)



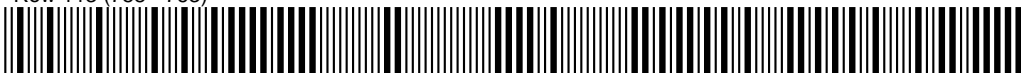
Row 111 (745 - 751)



Row 112 (751 - 758)



Row 113 (758 - 763)



Row 114 (763 - 769)



Row 115 (769 - 776)



Row 116 (777 - 783)



Row 117 (784 - 791)



Row 118 (791 - 796)



Row 119 (797 - 803)



Row 120 (803 - 809)



Row 121 (809 - 813)

