The First 100 Prime Empirical Proof in Long Division

P_1 2

Prime numbers are defined as numbers greater than 1 that have no positive divisors other than 1 and themselves. 1 is self-Prime. The sequence of Prime numbers starts with 2, 3, 5, 7, 11, and so on.

A Prime is any number only divisible by 1 and itself searching first that a number is not even if it divides by 2, optimising using a Vignette Sieve that if not only up to n/2 needs to be tested as a divisor, then 3 if not only up to n/3 needs to be tested as divisor, n/5, n/7, n/11, n/13, n/17, n/19, n/23, n/29, n/31 & so on so that only divisibility by a Prime needs to be checked up to √n for to prove not Prime & since for example we have ruled out that the number is a factor of three or two so there is no natural number greater than n/3 that can be a divisor.

Explanation: This prime is only divisible by 1 and itself. No division required.

https://github.com/Willtech/Prime

P_2 3

3 ÷ 2 = 1 remainder 1

```
    _1_
2 | 3
    2
    -
    1  ← remainder
```

P_3 5

5 ÷ 2 = 2 remainder 1

```
    __2__
2 | 5
    4
    -
    1  ← remainder
```

P_4 7

7 ÷ 2 = 3 remainder 1

```
    _3_
2 | 7
    6
    -
    1  ← remainder
```

P_5 11

11 ÷ 2 = 5 remainder 1

```
     __5__
2 | 11
     10
     --
     1  ← remainder
```

11 ÷ 3 = 3 remainder 2

```
     __3__
3 | 11
     9
     --
     2  ← remainder
```

P_6 13

13 ÷ 2 = 6 remainder 1

```
     __6__
2 | 13
     12
     --
     1  ← remainder
```

13 ÷ 3 = 4 remainder 1

```
     __4__
3 | 13
     12
     --
     1  ← remainder
```

P_7 17

17 ÷ 2 = 8 remainder 1

```
     __8__
2 | 17
     16
     --
     1  ← remainder
```

17 ÷ 3 = 5 remainder 2

```
     __5__
3 | 17
     15
     --
     2  ← remainder
```

P_8 19

19 ÷ 2 = 9 remainder 1

```
     __9__
2 | 19
     18
     --
     1  ← remainder
```

19 ÷ 3 = 6 remainder 1

```
     __6__
3 | 19
     18
     --
     1  ← remainder
```

P_9 23

23 ÷ 2 = 11 remainder 1

```
     __11__
2 | 23
     22
     --
     1  ← remainder
```

23 ÷ 3 = 7 remainder 2

```
     __7__
3 | 23
     21
     --
     2  ← remainder
```

P_{10} 29

29 ÷ 2 = 14 remainder 1

```
    __14__
2 | 29
     28
     --
     1  ← remainder
```

29 ÷ 3 = 9 remainder 2

```
    __9__
3 | 29
     27
     --
     2  ← remainder
```

29 ÷ 5 = 5 remainder 4

```
    __5__
5 | 29
     25
     --
     4  ← remainder
```

P_{11} 31

31 ÷ 2 = 15 remainder 1

```
    __15__
2 | 31
     30
     --
     1  ← remainder
```

31 ÷ 3 = 10 remainder 1

```
    __10__
3 | 31
     30
     --
     1  ← remainder
```

31 ÷ 5 = 6 remainder 1

```
    __6__
5 | 31
     30
     --
     1  ← remainder
```

P_{12} 37

37 ÷ 2 = 18 remainder 1

```
     __18__
2 | 37
     36
     --
     1  ← remainder
```

37 ÷ 3 = 12 remainder 1

```
     __12__
3 | 37
     36
     --
     1  ← remainder
```

37 ÷ 5 = 7 remainder 2

```
     __7__
5 | 37
     35
     --
     2  ← remainder
```

P_{13} 41

41 ÷ 2 = 20 remainder 1

```
    __20__
2 | 41
     40
     --
     1  ← remainder
```

41 ÷ 3 = 13 remainder 2

```
    __13__
3 | 41
     39
     --
     2  ← remainder
```

41 ÷ 5 = 8 remainder 1

```
    __8__
5 | 41
     40
     --
     1  ← remainder
```

P_{14} 43

43 ÷ 2 = 21 remainder 1

```
    __21__
2 | 43
     42
     --
     1  ← remainder
```

43 ÷ 3 = 14 remainder 1

```
    __14__
3 | 43
     42
     --
     1  ← remainder
```

43 ÷ 5 = 8 remainder 3

```
    __8__
5 | 43
     40
     --
     3  ← remainder
```

P_{15} 47

47 ÷ 2 = 23 remainder 1

```
    __23__
2 | 47
     46
     --
     1  ← remainder
```

47 ÷ 3 = 15 remainder 2

```
    __15__
3 | 47
     45
     --
     2  ← remainder
```

47 ÷ 5 = 9 remainder 2

```
    __9__
5 | 47
     45
     --
     2  ← remainder
```

P_{16} 53

53 ÷ 2 = 26 remainder 1

```
    __26__
2 | 53
     52
     --
     1  ← remainder
```

53 ÷ 3 = 17 remainder 2

```
    __17__
3 | 53
     51
     --
     2  ← remainder
```

53 ÷ 5 = 10 remainder 3

```
    __10__
5 | 53
     50
     --
     3  ← remainder
```

53 ÷ 7 = 7 remainder 4

```
    __7__
7 | 53
     49
     --
     4  ← remainder
```

P_{17} 59

59 ÷ 2 = 29 remainder 1

```
    __29__
2 | 59
     58
     --
     1  ← remainder
```

59 ÷ 3 = 19 remainder 2

```
    __19__
3 | 59
     57
     --
     2  ← remainder
```

59 ÷ 5 = 11 remainder 4

```
    __11__
5 | 59
     55
     --
     4  ← remainder
```

59 ÷ 7 = 8 remainder 3

```
    __8__
7 | 59
     56
     --
     3  ← remainder
```

P_{18} 61

61 ÷ 2 = 30 remainder 1

```
    __30__
2 | 61
     60
     --
     1  ← remainder
```

61 ÷ 3 = 20 remainder 1

```
    __20__
3 | 61
     60
     --
     1  ← remainder
```

61 ÷ 5 = 12 remainder 1

```
    __12__
5 | 61
     60
     --
     1  ← remainder
```

61 ÷ 7 = 8 remainder 5

```
    __8__
7 | 61
     56
     --
     5  ← remainder
```

P_{19} 67

67 ÷ 2 = 33 remainder 1

```
     __33__
2 | 67
     66
     --
     1  ← remainder
```

67 ÷ 3 = 22 remainder 1

```
     __22__
3 | 67
     66
     --
     1  ← remainder
```

67 ÷ 5 = 13 remainder 2

```
     __13__
5 | 67
     65
     --
     2  ← remainder
```

67 ÷ 7 = 9 remainder 4

```
     __9__
7 | 67
     63
     --
     4  ← remainder
```

P_{20} 71

71 ÷ 2 = 35 remainder 1

```
     __35__
2 | 71
     70
     --
     1  ← remainder
```

71 ÷ 3 = 23 remainder 2

```
     __23__
3 | 71
     69
     --
     2  ← remainder
```

71 ÷ 5 = 14 remainder 1

```
     __14__
5 | 71
     70
     --
     1  ← remainder
```

71 ÷ 7 = 10 remainder 1

```
     __10__
7 | 71
     70
     --
     1  ← remainder
```

P_{21} 73

73 ÷ 2 = 36 remainder 1

```
     __36__
2 | 73
     72
     --
     1  ← remainder
```

73 ÷ 3 = 24 remainder 1

```
     __24__
3 | 73
     72
     --
     1  ← remainder
```

73 ÷ 5 = 14 remainder 3

```
     __14__
5 | 73
     70
     --
     3  ← remainder
```

73 ÷ 7 = 10 remainder 3

```
     __10__
7 | 73
     70
     --
     3  ← remainder
```

P_{22} 79

79 ÷ 2 = 39 remainder 1

```
    __39__
2 | 79
     78
     --
     1  ← remainder
```

79 ÷ 3 = 26 remainder 1

```
    __26__
3 | 79
     78
     --
     1  ← remainder
```

79 ÷ 5 = 15 remainder 4

```
    __15__
5 | 79
     75
     --
     4  ← remainder
```

79 ÷ 7 = 11 remainder 2

```
    __11__
7 | 79
     77
     --
     2  ← remainder
```

P_{23} 83

83 ÷ 2 = 41 remainder 1

```
    __41__
2 | 83
     82
     --
     1  ← remainder
```

83 ÷ 3 = 27 remainder 2

```
    __27__
3 | 83
     81
     --
     2  ← remainder
```

83 ÷ 5 = 16 remainder 3

```
    __16__
5 | 83
     80
     --
     3  ← remainder
```

83 ÷ 7 = 11 remainder 6

```
    __11__
7 | 83
     77
     --
     6  ← remainder
```

P_{24} 89

89 ÷ 2 = 44 remainder 1

```
    __44__
2 | 89
     88
     --
     1  ← remainder
```

89 ÷ 3 = 29 remainder 2

```
    __29__
3 | 89
     87
     --
     2  ← remainder
```

89 ÷ 5 = 17 remainder 4

```
    __17__
5 | 89
     85
     --
     4  ← remainder
```

89 ÷ 7 = 12 remainder 5

```
    __12__
7 | 89
     84
     --
     5  ← remainder
```

P_{25} 97

97 ÷ 2 = 48 remainder 1

```
     __48__
2 | 97
     96
     --
     1  ← remainder
```

97 ÷ 3 = 32 remainder 1

```
     __32__
3 | 97
     96
     --
     1  ← remainder
```

97 ÷ 5 = 19 remainder 2

```
     __19__
5 | 97
     95
     --
     2  ← remainder
```

97 ÷ 7 = 13 remainder 6

```
     __13__
7 | 97
     91
     --
     6  ← remainder
```

P_{26} 101

101 ÷ 2 = 50 remainder 1

```
     __50__
2 | 101
     100
     ---
     1  ← remainder
```

101 ÷ 3 = 33 remainder 2

```
     __33__
3 | 101
     99
     ---
     2  ← remainder
```

101 ÷ 5 = 20 remainder 1

```
     __20__
5 | 101
     100
     ---
     1  ← remainder
```

101 ÷ 7 = 14 remainder 3

```
     __14__
7 | 101
     98
     ---
     3  ← remainder
```

P_{27} 103

103 ÷ 2 = 51 remainder 1

```
     __51__
2 | 103
     102
     ---
     1  ← remainder
```

103 ÷ 3 = 34 remainder 1

```
     __34__
3 | 103
     102
     ---
     1  ← remainder
```

103 ÷ 5 = 20 remainder 3

```
     __20__
5 | 103
     100
     ---
     3  ← remainder
```

103 ÷ 7 = 14 remainder 5

```
     __14__
7 | 103
     98
     ---
     5  ← remainder
```

P_{28} 107

107 ÷ 2 = 53 remainder 1

```
    __53__
2 | 107
     106
     ---
     1  ← remainder
```

107 ÷ 3 = 35 remainder 2

```
    __35__
3 | 107
     105
     ---
     2  ← remainder
```

107 ÷ 5 = 21 remainder 2

```
    __21__
5 | 107
     105
     ---
     2  ← remainder
```

107 ÷ 7 = 15 remainder 2

```
    __15__
7 | 107
     105
     ---
     2  ← remainder
```

P_{29} 109

109 ÷ 2 = 54 remainder 1

```
     __54__
2 | 109
     108
     ---
     1  ← remainder
```

109 ÷ 3 = 36 remainder 1

```
     __36__
3 | 109
     108
     ---
     1  ← remainder
```

109 ÷ 5 = 21 remainder 4

```
     __21__
5 | 109
     105
     ---
     4  ← remainder
```

109 ÷ 7 = 15 remainder 4

```
     __15__
7 | 109
     105
     ---
     4  ← remainder
```

P_{30} 113

113 ÷ 2 = 56 remainder 1

```
    __56__
2 | 113
     112
     ---
     1  ← remainder
```

113 ÷ 3 = 37 remainder 2

```
    __37__
3 | 113
     111
     ---
     2  ← remainder
```

113 ÷ 5 = 22 remainder 3

```
    __22__
5 | 113
     110
     ---
     3  ← remainder
```

113 ÷ 7 = 16 remainder 1

```
    __16__
7 | 113
     112
     ---
     1  ← remainder
```

P_{31} 127

127 ÷ 2 = 63 remainder 1

```
     __63__
2 | 127
     126
     ---
     1  ← remainder
```

127 ÷ 3 = 42 remainder 1

```
     __42__
3 | 127
     126
     ---
     1  ← remainder
```

127 ÷ 5 = 25 remainder 2

```
     __25__
5 | 127
     125
     ---
     2  ← remainder
```

127 ÷ 7 = 18 remainder 1

```
     __18__
7 | 127
     126
     ---
     1  ← remainder
```

127 ÷ 11 = 11 remainder 6

```
     __11__
11 | 127
     121
     ---
     6  ← remainder
```

P_{32} 131

131 ÷ 2 = 65 remainder 1

```
     __65__
2 | 131
     130
     ---
     1  ← remainder
```

131 ÷ 3 = 43 remainder 2

```
     __43__
3 | 131
     129
     ---
     2  ← remainder
```

131 ÷ 5 = 26 remainder 1

```
     __26__
5 | 131
     130
     ---
     1  ← remainder
```

131 ÷ 7 = 18 remainder 5

```
     __18__
7 | 131
     126
     ---
     5  ← remainder
```

131 ÷ 11 = 11 remainder 10

```
     __11__
11 | 131
     121
     ---
     10  ← remainder
```

P_{33} 137

137 ÷ 2 = 68 remainder 1

```
    __68__
2 | 137
     136
     ---
     1  ← remainder
```

137 ÷ 3 = 45 remainder 2

```
    __45__
3 | 137
     135
     ---
     2  ← remainder
```

137 ÷ 5 = 27 remainder 2

```
    __27__
5 | 137
     135
     ---
     2  ← remainder
```

137 ÷ 7 = 19 remainder 4

```
    __19__
7 | 137
     133
     ---
     4  ← remainder
```

137 ÷ 11 = 12 remainder 5

```
    __12__
11 | 137
     132
     ---
     5  ← remainder
```

P_{34} 139

139 ÷ 2 = 69 remainder 1

```
     __69__
2 | 139
     138
     ---
     1  ← remainder
```

139 ÷ 3 = 46 remainder 1

```
     __46__
3 | 139
     138
     ---
     1  ← remainder
```

139 ÷ 5 = 27 remainder 4

```
     __27__
5 | 139
     135
     ---
     4  ← remainder
```

139 ÷ 7 = 19 remainder 6

```
     __19__
7 | 139
     133
     ---
     6  ← remainder
```

139 ÷ 11 = 12 remainder 7

```
     __12__
11 | 139
     132
     ---
     7  ← remainder
```

P_{35} 149

149 ÷ 2 = 74 remainder 1

```
     __74__
2 | 149
     148
     ---
     1  ← remainder
```

149 ÷ 3 = 49 remainder 2

```
     __49__
3 | 149
     147
     ---
     2  ← remainder
```

149 ÷ 5 = 29 remainder 4

```
     __29__
5 | 149
     145
     ---
     4  ← remainder
```

149 ÷ 7 = 21 remainder 2

```
     __21__
7 | 149
     147
     ---
     2  ← remainder
```

149 ÷ 11 = 13 remainder 6

```
     __13__
11 | 149
     143
     ---
     6  ← remainder
```

P_{36} 151

151 ÷ 2 = 75 remainder 1

```
     __75__
2 | 151
     150
     ---
     1  ← remainder
```

151 ÷ 3 = 50 remainder 1

```
     __50__
3 | 151
     150
     ---
     1  ← remainder
```

151 ÷ 5 = 30 remainder 1

```
     __30__
5 | 151
     150
     ---
     1  ← remainder
```

151 ÷ 7 = 21 remainder 4

```
     __21__
7 | 151
     147
     ---
     4  ← remainder
```

151 ÷ 11 = 13 remainder 8

```
     __13__
11 | 151
     143
     ---
     8  ← remainder
```

P_{37} 157

157 ÷ 2 = 78 remainder 1

```
     __78__
2 | 157
     156
     ---
     1  ← remainder
```

157 ÷ 3 = 52 remainder 1

```
     __52__
3 | 157
     156
     ---
     1  ← remainder
```

157 ÷ 5 = 31 remainder 2

```
     __31__
5 | 157
     155
     ---
     2  ← remainder
```

157 ÷ 7 = 22 remainder 3

```
     __22__
7 | 157
     154
     ---
     3  ← remainder
```

157 ÷ 11 = 14 remainder 3

```
     __14__
11 | 157
     154
     ---
     3  ← remainder
```

P_{38} 163

163 ÷ 2 = 81 remainder 1

```
     __81__
2 | 163
     162
     ---
     1  ← remainder
```

163 ÷ 3 = 54 remainder 1

```
     __54__
3 | 163
     162
     ---
     1  ← remainder
```

163 ÷ 5 = 32 remainder 3

```
     __32__
5 | 163
     160
     ---
     3  ← remainder
```

163 ÷ 7 = 23 remainder 2

```
     __23__
7 | 163
     161
     ---
     2  ← remainder
```

163 ÷ 11 = 14 remainder 9

```
     __14__
11 | 163
     154
     ---
     9  ← remainder
```

P_{39} 167

167 ÷ 2 = 83 remainder 1

```
     __83__
2 | 167
     166
     ---
     1  ← remainder
```

167 ÷ 3 = 55 remainder 2

```
     __55__
3 | 167
     165
     ---
     2  ← remainder
```

167 ÷ 5 = 33 remainder 2

```
     __33__
5 | 167
     165
     ---
     2  ← remainder
```

167 ÷ 7 = 23 remainder 6

```
     __23__
7 | 167
     161
     ---
     6  ← remainder
```

167 ÷ 11 = 15 remainder 2

```
     __15__
11 | 167
     165
     ---
     2  ← remainder
```

P_{40} 173

173 ÷ 2 = 86 remainder 1

```
     __86__
2 | 173
     172
     ---
     1  ← remainder
```

173 ÷ 3 = 57 remainder 2

```
     __57__
3 | 173
     171
     ---
     2  ← remainder
```

173 ÷ 5 = 34 remainder 3

```
     __34__
5 | 173
     170
     ---
     3  ← remainder
```

173 ÷ 7 = 24 remainder 5

```
     __24__
7 | 173
     168
     ---
     5  ← remainder
```

173 ÷ 11 = 15 remainder 8

```
     __15__
11 | 173
     165
     ---
     8  ← remainder
```

173 ÷ 13 = 13 remainder 4

```
     __13__
13 | 173
     169
     ---
     4  ← remainder
```

P_{41} 179

179 ÷ 2 = 89 remainder 1

```
     __89__
2 | 179
     178
     ---
     1  ← remainder
```

179 ÷ 3 = 59 remainder 2

```
     __59__
3 | 179
     177
     ---
     2  ← remainder
```

179 ÷ 5 = 35 remainder 4

```
     __35__
5 | 179
     175
     ---
     4  ← remainder
```

179 ÷ 7 = 25 remainder 4

```
     __25__
7 | 179
     175
     ---
     4  ← remainder
```

179 ÷ 11 = 16 remainder 3

```
     __16__
11 | 179
     176
     ---
     3  ← remainder
```

179 ÷ 13 = 13 remainder 10

```
     __13__
13 | 179
     169
     ---
     10  ← remainder
```

P_{42} 181

181 ÷ 2 = 90 remainder 1

```
     __90__
2 | 181
     180
     ---
     1  ← remainder
```

181 ÷ 3 = 60 remainder 1

```
     __60__
3 | 181
     180
     ---
     1  ← remainder
```

181 ÷ 5 = 36 remainder 1

```
     __36__
5 | 181
     180
     ---
     1  ← remainder
```

181 ÷ 7 = 25 remainder 6

```
     __25__
7 | 181
     175
     ---
     6  ← remainder
```

181 ÷ 11 = 16 remainder 5

```
     __16__
11 | 181
     176
     ---
     5  ← remainder
```

181 ÷ 13 = 13 remainder 12

```
     __13__
13 | 181
     169
     ---
     12  ← remainder
```

P_{43} 191

191 ÷ 2 = 95 remainder 1

```
    __95__
2 | 191
     190
     ---
     1  ← remainder
```

191 ÷ 3 = 63 remainder 2

```
    __63__
3 | 191
     189
     ---
     2  ← remainder
```

191 ÷ 5 = 38 remainder 1

```
    __38__
5 | 191
     190
     ---
     1  ← remainder
```

191 ÷ 7 = 27 remainder 2

```
    __27__
7 | 191
     189
     ---
     2  ← remainder
```

191 ÷ 11 = 17 remainder 4

```
    __17__
11 | 191
     187
     ---
     4  ← remainder
```

191 ÷ 13 = 14 remainder 9

```
    __14__
13 | 191
     182
     ---
     9  ← remainder
```

P_{44} 193

193 ÷ 2 = 96 remainder 1

```
     __96__
2 | 193
     192
     ---
     1  ← remainder
```

193 ÷ 3 = 64 remainder 1

```
     __64__
3 | 193
     192
     ---
     1  ← remainder
```

193 ÷ 5 = 38 remainder 3

```
     __38__
5 | 193
     190
     ---
     3  ← remainder
```

193 ÷ 7 = 27 remainder 4

```
     __27__
7 | 193
     189
     ---
     4  ← remainder
```

193 ÷ 11 = 17 remainder 6

```
     __17__
11 | 193
     187
     ---
     6  ← remainder
```

193 ÷ 13 = 14 remainder 11

```
     __14__
13 | 193
     182
     ---
     11  ← remainder
```

P_{45} 197

197 ÷ 2 = 98 remainder 1

```
     __98__
2 | 197
     196
     ---
     1  ← remainder
```

197 ÷ 3 = 65 remainder 2

```
     __65__
3 | 197
     195
     ---
     2  ← remainder
```

197 ÷ 5 = 39 remainder 2

```
     __39__
5 | 197
     195
     ---
     2  ← remainder
```

197 ÷ 7 = 28 remainder 1

```
     __28__
7 | 197
     196
     ---
     1  ← remainder
```

197 ÷ 11 = 17 remainder 10

```
     __17__
11 | 197
     187
     ---
     10  ← remainder
```

197 ÷ 13 = 15 remainder 2

```
     __15__
13 | 197
     195
     ---
     2  ← remainder
```

P_{46} 199

199 ÷ 2 = 99 remainder 1

```
    __99__
2 | 199
     198
     ---
     1  ← remainder
```

199 ÷ 3 = 66 remainder 1

```
    __66__
3 | 199
     198
     ---
     1  ← remainder
```

199 ÷ 5 = 39 remainder 4

```
    __39__
5 | 199
     195
     ---
     4  ← remainder
```

199 ÷ 7 = 28 remainder 3

```
    __28__
7 | 199
     196
     ---
     3  ← remainder
```

199 ÷ 11 = 18 remainder 1

```
    __18__
11 | 199
     198
     ---
     1  ← remainder
```

199 ÷ 13 = 15 remainder 4

```
    __15__
13 | 199
     195
     ---
     4  ← remainder
```

P_{47} 211

211 ÷ 2 = 105 remainder 1

```
     __105__
2 | 211
     210
     ---
     1  ← remainder
```

211 ÷ 3 = 70 remainder 1

```
     __70__
3 | 211
     210
     ---
     1  ← remainder
```

211 ÷ 5 = 42 remainder 1

```
     __42__
5 | 211
     210
     ---
     1  ← remainder
```

211 ÷ 7 = 30 remainder 1

```
     __30__
7 | 211
     210
     ---
     1  ← remainder
```

211 ÷ 11 = 19 remainder 2

```
     __19__
11 | 211
     209
     ---
     2  ← remainder
```

211 ÷ 13 = 16 remainder 3

```
    __16__
13 | 211
     208
     ---
     3  ← remainder
```

P_{48} 223

223 ÷ 2 = 111 remainder 1

```
    __111__
2 | 223
     222
     ---
     1  ← remainder
```

223 ÷ 3 = 74 remainder 1

```
    __74__
3 | 223
     222
     ---
     1  ← remainder
```

223 ÷ 5 = 44 remainder 3

```
    __44__
5 | 223
     220
     ---
     3  ← remainder
```

223 ÷ 7 = 31 remainder 6

```
    __31__
7 | 223
     217
     ---
     6  ← remainder
```

223 ÷ 11 = 20 remainder 3

```
    __20__
11 | 223
     220
     ---
     3  ← remainder
```

223 ÷ 13 = 17 remainder 2

```
    __17__
13 | 223
     221
     ---
     2  ← remainder
```

P_{49} 227

227 ÷ 2 = 113 remainder 1

```
     __113__
2 | 227
     226
     ---
     1  ← remainder
```

227 ÷ 3 = 75 remainder 2

```
     __75__
3 | 227
     225
     ---
     2  ← remainder
```

227 ÷ 5 = 45 remainder 2

```
     __45__
5 | 227
     225
     ---
     2  ← remainder
```

227 ÷ 7 = 32 remainder 3

```
     __32__
7 | 227
     224
     ---
     3  ← remainder
```

227 ÷ 11 = 20 remainder 7

```
     __20__
11 | 227
     220
     ---
     7  ← remainder
```

227 ÷ 13 = 17 remainder 6

```
    __17__
13 | 227
     221
     ---
     6  ← remainder
```

P_{50} 229

229 ÷ 2 = 114 remainder 1

```
     __114__
2 | 229
     228
     ---
     1  ← remainder
```

229 ÷ 3 = 76 remainder 1

```
     __76__
3 | 229
     228
     ---
     1  ← remainder
```

229 ÷ 5 = 45 remainder 4

```
     __45__
5 | 229
     225
     ---
     4  ← remainder
```

229 ÷ 7 = 32 remainder 5

```
     __32__
7 | 229
     224
     ---
     5  ← remainder
```

229 ÷ 11 = 20 remainder 9

```
     __20__
11 | 229
     220
     ---
     9  ← remainder
```

229 ÷ 13 = 17 remainder 8

```
    __17__
13 | 229
     221
     ---
     8  ← remainder
```

P_{51} 233

233 ÷ 2 = 116 remainder 1

```
     __116__
2 | 233
     232
     ---
     1  ← remainder
```

233 ÷ 3 = 77 remainder 2

```
     __77__
3 | 233
     231
     ---
     2  ← remainder
```

233 ÷ 5 = 46 remainder 3

```
     __46__
5 | 233
     230
     ---
     3  ← remainder
```

233 ÷ 7 = 33 remainder 2

```
     __33__
7 | 233
     231
     ---
     2  ← remainder
```

233 ÷ 11 = 21 remainder 2

```
     __21__
11 | 233
     231
     ---
     2  ← remainder
```

233 ÷ 13 = 17 remainder 12

```
    __17__
13 | 233
     221
     ---
     12  ← remainder
```

P_{52} 239

239 ÷ 2 = 119 remainder 1

```
    __119__
2 | 239
     238
     ---
     1  ← remainder
```

239 ÷ 3 = 79 remainder 2

```
    __79__
3 | 239
     237
     ---
     2  ← remainder
```

239 ÷ 5 = 47 remainder 4

```
    __47__
5 | 239
     235
     ---
     4  ← remainder
```

239 ÷ 7 = 34 remainder 1

```
    __34__
7 | 239
     238
     ---
     1  ← remainder
```

239 ÷ 11 = 21 remainder 8

```
    __21__
11 | 239
     231
     ---
     8  ← remainder
```

239 ÷ 13 = 18 remainder 5

```
     __18__
13 | 239
     234
     ---
     5  ← remainder
```

P_{53} 241

241 ÷ 2 = 120 remainder 1

```
    __120__
2 | 241
     240
     ---
     1  ← remainder
```

241 ÷ 3 = 80 remainder 1

```
    __80__
3 | 241
     240
     ---
     1  ← remainder
```

241 ÷ 5 = 48 remainder 1

```
    __48__
5 | 241
     240
     ---
     1  ← remainder
```

241 ÷ 7 = 34 remainder 3

```
    __34__
7 | 241
     238
     ---
     3  ← remainder
```

241 ÷ 11 = 21 remainder 10

```
    __21__
11 | 241
     231
     ---
     10  ← remainder
```

241 ÷ 13 = 18 remainder 7

```
    __18__
13 | 241
     234
     ---
     7  ← remainder
```

P_{54} 251

251 ÷ 2 = 125 remainder 1

```
     __125__
2 | 251
     250
     ---
     1  ← remainder
```

251 ÷ 3 = 83 remainder 2

```
     __83__
3 | 251
     249
     ---
     2  ← remainder
```

251 ÷ 5 = 50 remainder 1

```
     __50__
5 | 251
     250
     ---
     1  ← remainder
```

251 ÷ 7 = 35 remainder 6

```
     __35__
7 | 251
     245
     ---
     6  ← remainder
```

251 ÷ 11 = 22 remainder 9

```
     __22__
11 | 251
     242
     ---
     9  ← remainder
```

251 ÷ 13 = 19 remainder 4

```
    __19__
13 | 251
     247
     ---
     4  ← remainder
```

P_{55} 257

257 ÷ 2 = 128 remainder 1

```
    __128__
2 | 257
     256
     ---
     1  ← remainder
```

257 ÷ 3 = 85 remainder 2

```
    __85__
3 | 257
     255
     ---
     2  ← remainder
```

257 ÷ 5 = 51 remainder 2

```
    __51__
5 | 257
     255
     ---
     2  ← remainder
```

257 ÷ 7 = 36 remainder 5

```
    __36__
7 | 257
     252
     ---
     5  ← remainder
```

257 ÷ 11 = 23 remainder 4

```
    __23__
11 | 257
     253
     ---
     4  ← remainder
```

257 ÷ 13 = 19 remainder 10

```
     __19__
13 | 257
     247
     ---
     10  ← remainder
```

P_{56} 263

263 ÷ 2 = 131 remainder 1

```
     __131__
2 | 263
     262
     ---
     1  ← remainder
```

263 ÷ 3 = 87 remainder 2

```
     __87__
3 | 263
     261
     ---
     2  ← remainder
```

263 ÷ 5 = 52 remainder 3

```
     __52__
5 | 263
     260
     ---
     3  ← remainder
```

263 ÷ 7 = 37 remainder 4

```
     __37__
7 | 263
     259
     ---
     4  ← remainder
```

263 ÷ 11 = 23 remainder 10

```
     __23__
11 | 263
     253
     ---
     10  ← remainder
```

263 ÷ 13 = 20 remainder 3

```
     __20__
13 | 263
     260
     ---
     3  ← remainder
```

P_{57} 269

269 ÷ 2 = 134 remainder 1

```
     __134__
2 | 269
     268
     ---
     1  ← remainder
```

269 ÷ 3 = 89 remainder 2

```
     __89__
3 | 269
     267
     ---
     2  ← remainder
```

269 ÷ 5 = 53 remainder 4

```
     __53__
5 | 269
     265
     ---
     4  ← remainder
```

269 ÷ 7 = 38 remainder 3

```
     __38__
7 | 269
     266
     ---
     3  ← remainder
```

269 ÷ 11 = 24 remainder 5

```
     __24__
11 | 269
     264
     ---
     5  ← remainder
```

269 ÷ 13 = 20 remainder 9

```
     __20__
13 | 269
     260
     ---
     9  ← remainder
```

P_{58} 271

271 ÷ 2 = 135 remainder 1

```
     __135__
2 | 271
     270
     ---
     1  ← remainder
```

271 ÷ 3 = 90 remainder 1

```
     __90__
3 | 271
     270
     ---
     1  ← remainder
```

271 ÷ 5 = 54 remainder 1

```
     __54__
5 | 271
     270
     ---
     1  ← remainder
```

271 ÷ 7 = 38 remainder 5

```
     __38__
7 | 271
     266
     ---
     5  ← remainder
```

271 ÷ 11 = 24 remainder 7

```
     __24__
11 | 271
     264
     ---
     7  ← remainder
```

271 ÷ 13 = 20 remainder 11

```
     __20__
13 | 271
     260
     ---
     11  ← remainder
```

P_{59} 277

277 ÷ 2 = 138 remainder 1

```
     __138__
2 | 277
     276
     ---
     1  ← remainder
```

277 ÷ 3 = 92 remainder 1

```
     __92__
3 | 277
     276
     ---
     1  ← remainder
```

277 ÷ 5 = 55 remainder 2

```
     __55__
5 | 277
     275
     ---
     2  ← remainder
```

277 ÷ 7 = 39 remainder 4

```
     __39__
7 | 277
     273
     ---
     4  ← remainder
```

277 ÷ 11 = 25 remainder 2

```
     __25__
11 | 277
     275
     ---
     2  ← remainder
```

277 ÷ 13 = 21 remainder 4

```
     __21__
13 | 277
     273
     ---
     4  ← remainder
```

P_{60} 281

281 ÷ 2 = 140 remainder 1

```
     __140__
2 | 281
     280
     ---
     1  ← remainder
```

281 ÷ 3 = 93 remainder 2

```
     __93__
3 | 281
     279
     ---
     2  ← remainder
```

281 ÷ 5 = 56 remainder 1

```
     __56__
5 | 281
     280
     ---
     1  ← remainder
```

281 ÷ 7 = 40 remainder 1

```
     __40__
7 | 281
     280
     ---
     1  ← remainder
```

281 ÷ 11 = 25 remainder 6

```
     __25__
11 | 281
     275
     ---
     6  ← remainder
```

281 ÷ 13 = 21 remainder 8

```
     __21__
13 | 281
     273
     ---
     8  ← remainder
```

P_{61} 283

283 ÷ 2 = 141 remainder 1

```
     __141__
2 | 283
     282
     ---
     1  ← remainder
```

283 ÷ 3 = 94 remainder 1

```
     __94__
3 | 283
     282
     ---
     1  ← remainder
```

283 ÷ 5 = 56 remainder 3

```
     __56__
5 | 283
     280
     ---
     3  ← remainder
```

283 ÷ 7 = 40 remainder 3

```
     __40__
7 | 283
     280
     ---
     3  ← remainder
```

283 ÷ 11 = 25 remainder 8

```
     __25__
11 | 283
     275
     ---
     8  ← remainder
```

283 ÷ 13 = 21 remainder 10

```
     __21__
13 | 283
     273
     ---
     10  ← remainder
```

P_{62} 293

293 ÷ 2 = 146 remainder 1

```
     __146__
2 | 293
     292
     ---
     1  ← remainder
```

293 ÷ 3 = 97 remainder 2

```
     __97__
3 | 293
     291
     ---
     2  ← remainder
```

293 ÷ 5 = 58 remainder 3

```
     __58__
5 | 293
     290
     ---
     3  ← remainder
```

293 ÷ 7 = 41 remainder 6

```
     __41__
7 | 293
     287
     ---
     6  ← remainder
```

293 ÷ 11 = 26 remainder 7

```
     __26__
11 | 293
     286
     ---
     7  ← remainder
```

293 ÷ 13 = 22 remainder 7

```
    __22__
13 | 293
     286
     ---
     7  ← remainder
```

293 ÷ 17 = 17 remainder 4

```
    __17__
17 | 293
     289
     ---
     4  ← remainder
```

P_{63} 307

307 ÷ 2 = 153 remainder 1

```
     __153__
2 | 307
     306
     ---
     1  ← remainder
```

307 ÷ 3 = 102 remainder 1

```
     __102__
3 | 307
     306
     ---
     1  ← remainder
```

307 ÷ 5 = 61 remainder 2

```
     __61__
5 | 307
     305
     ---
     2  ← remainder
```

307 ÷ 7 = 43 remainder 6

```
     __43__
7 | 307
     301
     ---
     6  ← remainder
```

307 ÷ 11 = 27 remainder 10

```
     __27__
11 | 307
     297
     ---
     10  ← remainder
```

307 ÷ 13 = 23 remainder 8

```
    __23__
13 | 307
     299
     ---
     8  ← remainder
```

307 ÷ 17 = 18 remainder 1

```
    __18__
17 | 307
     306
     ---
     1  ← remainder
```

P_{64} 311

311 ÷ 2 = 155 remainder 1

```
     __155__
2 | 311
     310
     ---
     1  ← remainder
```

311 ÷ 3 = 103 remainder 2

```
     __103__
3 | 311
     309
     ---
     2  ← remainder
```

311 ÷ 5 = 62 remainder 1

```
     __62__
5 | 311
     310
     ---
     1  ← remainder
```

311 ÷ 7 = 44 remainder 3

```
     __44__
7 | 311
     308
     ---
     3  ← remainder
```

311 ÷ 11 = 28 remainder 3

```
     __28__
11 | 311
     308
     ---
     3  ← remainder
```

311 ÷ 13 = 23 remainder 12

```
     __23__
13 | 311
     299
     ---
     12  ← remainder
```

311 ÷ 17 = 18 remainder 5

```
     __18__
17 | 311
     306
     ---
     5  ← remainder
```

P_{65} 313

313 ÷ 2 = 156 remainder 1

```
     __156__
2 | 313
     312
     ---
     1  ← remainder
```

313 ÷ 3 = 104 remainder 1

```
     __104__
3 | 313
     312
     ---
     1  ← remainder
```

313 ÷ 5 = 62 remainder 3

```
     __62__
5 | 313
     310
     ---
     3  ← remainder
```

313 ÷ 7 = 44 remainder 5

```
     __44__
7 | 313
     308
     ---
     5  ← remainder
```

313 ÷ 11 = 28 remainder 5

```
     __28__
11 | 313
     308
     ---
     5  ← remainder
```

313 ÷ 13 = 24 remainder 1

```
    __24__
13 | 313
     312
     ---
     1  ← remainder
```

313 ÷ 17 = 18 remainder 7

```
    __18__
17 | 313
     306
     ---
     7  ← remainder
```

P_{66} 317

317 ÷ 2 = 158 remainder 1

```
     __158__
2 | 317
     316
     ---
     1  ← remainder
```

317 ÷ 3 = 105 remainder 2

```
     __105__
3 | 317
     315
     ---
     2  ← remainder
```

317 ÷ 5 = 63 remainder 2

```
     __63__
5 | 317
     315
     ---
     2  ← remainder
```

317 ÷ 7 = 45 remainder 2

```
     __45__
7 | 317
     315
     ---
     2  ← remainder
```

317 ÷ 11 = 28 remainder 9

```
     __28__
11 | 317
     308
     ---
     9  ← remainder
```

317 ÷ 13 = 24 remainder 5

```
    __24__
13 | 317
     312
     ---
     5  ← remainder
```

317 ÷ 17 = 18 remainder 11

```
    __18__
17 | 317
     306
     ---
     11  ← remainder
```

P_{67} 331

331 ÷ 2 = 165 remainder 1

```
    __165__
2 | 331
     330
     ---
     1  ← remainder
```

331 ÷ 3 = 110 remainder 1

```
    __110__
3 | 331
     330
     ---
     1  ← remainder
```

331 ÷ 5 = 66 remainder 1

```
    __66__
5 | 331
     330
     ---
     1  ← remainder
```

331 ÷ 7 = 47 remainder 2

```
    __47__
7 | 331
     329
     ---
     2  ← remainder
```

331 ÷ 11 = 30 remainder 1

```
    __30__
11 | 331
     330
     ---
     1  ← remainder
```

331 ÷ 13 = 25 remainder 6

```
    __25__
13 | 331
     325
     ---
     6  ← remainder
```

331 ÷ 17 = 19 remainder 8

```
    __19__
17 | 331
     323
     ---
     8  ← remainder
```

P_{68} 337

337 ÷ 2 = 168 remainder 1

```
    __168__
2 | 337
     336
     ---
     1  ← remainder
```

337 ÷ 3 = 112 remainder 1

```
    __112__
3 | 337
     336
     ---
     1  ← remainder
```

337 ÷ 5 = 67 remainder 2

```
    __67__
5 | 337
     335
     ---
     2  ← remainder
```

337 ÷ 7 = 48 remainder 1

```
    __48__
7 | 337
     336
     ---
     1  ← remainder
```

337 ÷ 11 = 30 remainder 7

```
    __30__
11 | 337
     330
     ---
     7  ← remainder
```

337 ÷ 13 = 25 remainder 12

```
    __25__
13 | 337
     325
     ---
     12  ← remainder
```

337 ÷ 17 = 19 remainder 14

```
    __19__
17 | 337
     323
     ---
     14  ← remainder
```

P_{69} 347

347 ÷ 2 = 173 remainder 1

```
     __173__
2 | 347
     346
     ---
     1  ← remainder
```

347 ÷ 3 = 115 remainder 2

```
     __115__
3 | 347
     345
     ---
     2  ← remainder
```

347 ÷ 5 = 69 remainder 2

```
     __69__
5 | 347
     345
     ---
     2  ← remainder
```

347 ÷ 7 = 49 remainder 4

```
     __49__
7 | 347
     343
     ---
     4  ← remainder
```

347 ÷ 11 = 31 remainder 6

```
     __31__
11 | 347
     341
     ---
     6  ← remainder
```

347 ÷ 13 = 26 remainder 9

```
    __26__
13 | 347
     338
     ---
     9  ← remainder
```

347 ÷ 17 = 20 remainder 7

```
    __20__
17 | 347
     340
     ---
     7  ← remainder
```

P_{70} 349

349 ÷ 2 = 174 remainder 1

```
    __174__
2 | 349
     348
     ---
     1  ← remainder
```

349 ÷ 3 = 116 remainder 1

```
    __116__
3 | 349
     348
     ---
     1  ← remainder
```

349 ÷ 5 = 69 remainder 4

```
    __69__
5 | 349
     345
     ---
     4  ← remainder
```

349 ÷ 7 = 49 remainder 6

```
    __49__
7 | 349
     343
     ---
     6  ← remainder
```

349 ÷ 11 = 31 remainder 8

```
    __31__
11 | 349
     341
     ---
     8  ← remainder
```

349 ÷ 13 = 26 remainder 11

```
    __26__
13 | 349
     338
     ---
     11  ← remainder
```

349 ÷ 17 = 20 remainder 9

```
    __20__
17 | 349
     340
     ---
     9  ← remainder
```

P_{71} 353

353 ÷ 2 = 176 remainder 1

```
     __176__
2 | 353
     352
     ---
     1  ← remainder
```

353 ÷ 3 = 117 remainder 2

```
     __117__
3 | 353
     351
     ---
     2  ← remainder
```

353 ÷ 5 = 70 remainder 3

```
     __70__
5 | 353
     350
     ---
     3  ← remainder
```

353 ÷ 7 = 50 remainder 3

```
     __50__
7 | 353
     350
     ---
     3  ← remainder
```

353 ÷ 11 = 32 remainder 1

```
     __32__
11 | 353
     352
     ---
     1  ← remainder
```

353 ÷ 13 = 27 remainder 2

```
    __27__
13 | 353
     351
     ---
     2  ← remainder
```

353 ÷ 17 = 20 remainder 13

```
    __20__
17 | 353
     340
     ---
     13  ← remainder
```

P_{72} 359

359 ÷ 2 = 179 remainder 1

```
     __179__
2 | 359
     358
     ---
     1  ← remainder
```

359 ÷ 3 = 119 remainder 2

```
     __119__
3 | 359
     357
     ---
     2  ← remainder
```

359 ÷ 5 = 71 remainder 4

```
     __71__
5 | 359
     355
     ---
     4  ← remainder
```

359 ÷ 7 = 51 remainder 2

```
     __51__
7 | 359
     357
     ---
     2  ← remainder
```

359 ÷ 11 = 32 remainder 7

```
     __32__
11 | 359
     352
     ---
     7  ← remainder
```

359 ÷ 13 = 27 remainder 8

```
    __27__
13 | 359
     351
     ---
     8  ← remainder
```

359 ÷ 17 = 21 remainder 2

```
    __21__
17 | 359
     357
     ---
     2  ← remainder
```

P_{73} 367

367 ÷ 2 = 183 remainder 1

```
    __183__
2 | 367
     366
     ---
     1  ← remainder
```

367 ÷ 3 = 122 remainder 1

```
    __122__
3 | 367
     366
     ---
     1  ← remainder
```

367 ÷ 5 = 73 remainder 2

```
    __73__
5 | 367
     365
     ---
     2  ← remainder
```

367 ÷ 7 = 52 remainder 3

```
    __52__
7 | 367
     364
     ---
     3  ← remainder
```

367 ÷ 11 = 33 remainder 4

```
    __33__
11 | 367
     363
     ---
     4  ← remainder
```

367 ÷ 13 = 28 remainder 3

```
     __28__
13 | 367
     364
     ---
     3  ← remainder
```

367 ÷ 17 = 21 remainder 10

```
     __21__
17 | 367
     357
     ---
     10  ← remainder
```

367 ÷ 19 = 19 remainder 6

```
     __19__
19 | 367
     361
     ---
     6  ← remainder
```

P_{74} 373

373 ÷ 2 = 186 remainder 1

```
     __186__
2 | 373
     372
     ---
     1  ← remainder
```

373 ÷ 3 = 124 remainder 1

```
     __124__
3 | 373
     372
     ---
     1  ← remainder
```

373 ÷ 5 = 74 remainder 3

```
     __74__
5 | 373
     370
     ---
     3  ← remainder
```

373 ÷ 7 = 53 remainder 2

```
     __53__
7 | 373
     371
     ---
     2  ← remainder
```

373 ÷ 11 = 33 remainder 10

```
     __33__
11 | 373
     363
     ---
     10  ← remainder
```

373 ÷ 13 = 28 remainder 9

```
    __28__
13 | 373
     364
     ---
     9  ← remainder
```

373 ÷ 17 = 21 remainder 16

```
    __21__
17 | 373
     357
     ---
     16  ← remainder
```

373 ÷ 19 = 19 remainder 12

```
    __19__
19 | 373
     361
     ---
     12  ← remainder
```

P_{75} 379

379 ÷ 2 = 189 remainder 1

```
     __189__
2 | 379
     378
     ---
     1  ← remainder
```

379 ÷ 3 = 126 remainder 1

```
     __126__
3 | 379
     378
     ---
     1  ← remainder
```

379 ÷ 5 = 75 remainder 4

```
     __75__
5 | 379
     375
     ---
     4  ← remainder
```

379 ÷ 7 = 54 remainder 1

```
     __54__
7 | 379
     378
     ---
     1  ← remainder
```

379 ÷ 11 = 34 remainder 5

```
     __34__
11 | 379
     374
     ---
     5  ← remainder
```

379 ÷ 13 = 29 remainder 2

```
    __29__
13 | 379
     377
     ---
     2  ← remainder
```

379 ÷ 17 = 22 remainder 5

```
    __22__
17 | 379
     374
     ---
     5  ← remainder
```

379 ÷ 19 = 19 remainder 18

```
    __19__
19 | 379
     361
     ---
     18  ← remainder
```

P_{76} 383

383 ÷ 2 = 191 remainder 1

```
     __191__
2 | 383
     382
     ---
     1  ← remainder
```

383 ÷ 3 = 127 remainder 2

```
     __127__
3 | 383
     381
     ---
     2  ← remainder
```

383 ÷ 5 = 76 remainder 3

```
     __76__
5 | 383
     380
     ---
     3  ← remainder
```

383 ÷ 7 = 54 remainder 5

```
     __54__
7 | 383
     378
     ---
     5  ← remainder
```

383 ÷ 11 = 34 remainder 9

```
     __34__
11 | 383
     374
     ---
     9  ← remainder
```

383 ÷ 13 = 29 remainder 6

```
    __29__
13 | 383
     377
     ---
     6  ← remainder
```

383 ÷ 17 = 22 remainder 9

```
    __22__
17 | 383
     374
     ---
     9  ← remainder
```

383 ÷ 19 = 20 remainder 3

```
    __20__
19 | 383
     380
     ---
     3  ← remainder
```

P_{77} 389

389 ÷ 2 = 194 remainder 1

```
     __194__
2 | 389
     388
     ---
     1  ← remainder
```

389 ÷ 3 = 129 remainder 2

```
     __129__
3 | 389
     387
     ---
     2  ← remainder
```

389 ÷ 5 = 77 remainder 4

```
     __77__
5 | 389
     385
     ---
     4  ← remainder
```

389 ÷ 7 = 55 remainder 4

```
     __55__
7 | 389
     385
     ---
     4  ← remainder
```

389 ÷ 11 = 35 remainder 4

```
     __35__
11 | 389
     385
     ---
     4  ← remainder
```

389 ÷ 13 = 29 remainder 12

```
    __29__
13 | 389
     377
     ---
     12  ← remainder
```

389 ÷ 17 = 22 remainder 15

```
    __22__
17 | 389
     374
     ---
     15  ← remainder
```

389 ÷ 19 = 20 remainder 9

```
    __20__
19 | 389
     380
     ---
     9  ← remainder
```

P_{78} 397

397 ÷ 2 = 198 remainder 1

```
    __198__
2 | 397
     396
     ---
     1  ← remainder
```

397 ÷ 3 = 132 remainder 1

```
    __132__
3 | 397
     396
     ---
     1  ← remainder
```

397 ÷ 5 = 79 remainder 2

```
    __79__
5 | 397
     395
     ---
     2  ← remainder
```

397 ÷ 7 = 56 remainder 5

```
    __56__
7 | 397
     392
     ---
     5  ← remainder
```

397 ÷ 11 = 36 remainder 1

```
    __36__
11 | 397
     396
     ---
     1  ← remainder
```

397 ÷ 13 = 30 remainder 7

```
    __30__
13 | 397
     390
     ---
     7  ← remainder
```

397 ÷ 17 = 23 remainder 6

```
    __23__
17 | 397
     391
     ---
     6  ← remainder
```

397 ÷ 19 = 20 remainder 17

```
    __20__
19 | 397
     380
     ---
     17  ← remainder
```

P_{79} 401

401 ÷ 2 = 200 remainder 1

```
    __200__
2 | 401
     400
     ---
     1  ← remainder
```

401 ÷ 3 = 133 remainder 2

```
    __133__
3 | 401
     399
     ---
     2  ← remainder
```

401 ÷ 5 = 80 remainder 1

```
    __80__
5 | 401
     400
     ---
     1  ← remainder
```

401 ÷ 7 = 57 remainder 2

```
    __57__
7 | 401
     399
     ---
     2  ← remainder
```

401 ÷ 11 = 36 remainder 5

```
    __36__
11 | 401
     396
     ---
     5  ← remainder
```

401 ÷ 13 = 30 remainder 11

```
    __30__
13 | 401
     390
     ---
     11  ← remainder
```

401 ÷ 17 = 23 remainder 10

```
    __23__
17 | 401
     391
     ---
     10  ← remainder
```

401 ÷ 19 = 21 remainder 2

```
    __21__
19 | 401
     399
     ---
     2  ← remainder
```

P_{80} 409

409 ÷ 2 = 204 remainder 1

```
     __204__
2 | 409
     408
     ---
     1  ← remainder
```

409 ÷ 3 = 136 remainder 1

```
     __136__
3 | 409
     408
     ---
     1  ← remainder
```

409 ÷ 5 = 81 remainder 4

```
     __81__
5 | 409
     405
     ---
     4  ← remainder
```

409 ÷ 7 = 58 remainder 3

```
     __58__
7 | 409
     406
     ---
     3  ← remainder
```

409 ÷ 11 = 37 remainder 2

```
     __37__
11 | 409
     407
     ---
     2  ← remainder
```

409 ÷ 13 = 31 remainder 6

```
    __31__
13 | 409
     403
     ---
     6  ← remainder
```

409 ÷ 17 = 24 remainder 1

```
    __24__
17 | 409
     408
     ---
     1  ← remainder
```

409 ÷ 19 = 21 remainder 10

```
    __21__
19 | 409
     399
     ---
     10  ← remainder
```

P_{81} 419

419 ÷ 2 = 209 remainder 1

```
     __209__
2 | 419
     418
     ---
     1  ← remainder
```

419 ÷ 3 = 139 remainder 2

```
     __139__
3 | 419
     417
     ---
     2  ← remainder
```

419 ÷ 5 = 83 remainder 4

```
     __83__
5 | 419
     415
     ---
     4  ← remainder
```

419 ÷ 7 = 59 remainder 6

```
     __59__
7 | 419
     413
     ---
     6  ← remainder
```

419 ÷ 11 = 38 remainder 1

```
     __38__
11 | 419
     418
     ---
     1  ← remainder
```

419 ÷ 13 = 32 remainder 3

```
     __32__
13 | 419
     416
     ---
     3  ← remainder
```

419 ÷ 17 = 24 remainder 11

```
     __24__
17 | 419
     408
     ---
     11  ← remainder
```

419 ÷ 19 = 22 remainder 1

```
     __22__
19 | 419
     418
     ---
     1  ← remainder
```

P_{82} 421

421 ÷ 2 = 210 remainder 1

```
    __210__
2 | 421
     420
     ---
     1  ← remainder
```

421 ÷ 3 = 140 remainder 1

```
    __140__
3 | 421
     420
     ---
     1  ← remainder
```

421 ÷ 5 = 84 remainder 1

```
    __84__
5 | 421
     420
     ---
     1  ← remainder
```

421 ÷ 7 = 60 remainder 1

```
    __60__
7 | 421
     420
     ---
     1  ← remainder
```

421 ÷ 11 = 38 remainder 3

```
    __38__
11 | 421
     418
     ---
     3  ← remainder
```

421 ÷ 13 = 32 remainder 5

```
    __32__
13 | 421
     416
     ---
     5  ← remainder
```

421 ÷ 17 = 24 remainder 13

```
    __24__
17 | 421
     408
     ---
     13  ← remainder
```

421 ÷ 19 = 22 remainder 3

```
    __22__
19 | 421
     418
     ---
     3  ← remainder
```

P_{83} 431

431 ÷ 2 = 215 remainder 1

```
     __215__
2 | 431
     430
     ---
     1  ← remainder
```

431 ÷ 3 = 143 remainder 2

```
     __143__
3 | 431
     429
     ---
     2  ← remainder
```

431 ÷ 5 = 86 remainder 1

```
     __86__
5 | 431
     430
     ---
     1  ← remainder
```

431 ÷ 7 = 61 remainder 4

```
     __61__
7 | 431
     427
     ---
     4  ← remainder
```

431 ÷ 11 = 39 remainder 2

```
     __39__
11 | 431
     429
     ---
     2  ← remainder
```

431 ÷ 13 = 33 remainder 2

```
    __33__
13 | 431
     429
     ---
     2  ← remainder
```

431 ÷ 17 = 25 remainder 6

```
    __25__
17 | 431
     425
     ---
     6  ← remainder
```

431 ÷ 19 = 22 remainder 13

```
    __22__
19 | 431
     418
     ---
     13  ← remainder
```

P_{84} 433

433 ÷ 2 = 216 remainder 1

```
     __216__
2 | 433
     432
     ---
     1  ← remainder
```

433 ÷ 3 = 144 remainder 1

```
     __144__
3 | 433
     432
     ---
     1  ← remainder
```

433 ÷ 5 = 86 remainder 3

```
     __86__
5 | 433
     430
     ---
     3  ← remainder
```

433 ÷ 7 = 61 remainder 6

```
     __61__
7 | 433
     427
     ---
     6  ← remainder
```

433 ÷ 11 = 39 remainder 4

```
     __39__
11 | 433
     429
     ---
     4  ← remainder
```

433 ÷ 13 = 33 remainder 4

```
    __33__
13 | 433
     429
     ---
     4  ← remainder
```

433 ÷ 17 = 25 remainder 8

```
    __25__
17 | 433
     425
     ---
     8  ← remainder
```

433 ÷ 19 = 22 remainder 15

```
    __22__
19 | 433
     418
     ---
     15  ← remainder
```

P_{85} 439

439 ÷ 2 = 219 remainder 1

```
    __219__
2 | 439
     438
     ---
     1  ← remainder
```

439 ÷ 3 = 146 remainder 1

```
    __146__
3 | 439
     438
     ---
     1  ← remainder
```

439 ÷ 5 = 87 remainder 4

```
    __87__
5 | 439
     435
     ---
     4  ← remainder
```

439 ÷ 7 = 62 remainder 5

```
    __62__
7 | 439
     434
     ---
     5  ← remainder
```

439 ÷ 11 = 39 remainder 10

```
    __39__
11 | 439
     429
     ---
     10  ← remainder
```

439 ÷ 13 = 33 remainder 10

```
    __33__
13 | 439
     429
     ---
     10  ← remainder
```

439 ÷ 17 = 25 remainder 14

```
    __25__
17 | 439
     425
     ---
     14  ← remainder
```

439 ÷ 19 = 23 remainder 2

```
    __23__
19 | 439
     437
     ---
     2  ← remainder
```

P_{86} 443

443 ÷ 2 = 221 remainder 1

```
     __221__
2 | 443
     442
     ---
     1  ← remainder
```

443 ÷ 3 = 147 remainder 2

```
     __147__
3 | 443
     441
     ---
     2  ← remainder
```

443 ÷ 5 = 88 remainder 3

```
     __88__
5 | 443
     440
     ---
     3  ← remainder
```

443 ÷ 7 = 63 remainder 2

```
     __63__
7 | 443
     441
     ---
     2  ← remainder
```

443 ÷ 11 = 40 remainder 3

```
     __40__
11 | 443
     440
     ---
     3  ← remainder
```

443 ÷ 13 = 34 remainder 1

```
    __34__
13 | 443
     442
     ---
     1  ← remainder
```

443 ÷ 17 = 26 remainder 1

```
    __26__
17 | 443
     442
     ---
     1  ← remainder
```

443 ÷ 19 = 23 remainder 6

```
    __23__
19 | 443
     437
     ---
     6  ← remainder
```

P_{87} 449

449 ÷ 2 = 224 remainder 1

```
    __224__
2 | 449
     448
     ---
     1  ← remainder
```

449 ÷ 3 = 149 remainder 2

```
    __149__
3 | 449
     447
     ---
     2  ← remainder
```

449 ÷ 5 = 89 remainder 4

```
    __89__
5 | 449
     445
     ---
     4  ← remainder
```

449 ÷ 7 = 64 remainder 1

```
    __64__
7 | 449
     448
     ---
     1  ← remainder
```

449 ÷ 11 = 40 remainder 9

```
    __40__
11 | 449
     440
     ---
     9  ← remainder
```

449 ÷ 13 = 34 remainder 7

```
    __34__
13 | 449
     442
     ---
     7  ← remainder
```

449 ÷ 17 = 26 remainder 7

```
    __26__
17 | 449
     442
     ---
     7  ← remainder
```

449 ÷ 19 = 23 remainder 12

```
    __23__
19 | 449
     437
     ---
     12  ← remainder
```

P_{88} 457

457 ÷ 2 = 228 remainder 1

```
    __228__
2 | 457
     456
     ---
     1  ← remainder
```

457 ÷ 3 = 152 remainder 1

```
    __152__
3 | 457
     456
     ---
     1  ← remainder
```

457 ÷ 5 = 91 remainder 2

```
    __91__
5 | 457
     455
     ---
     2  ← remainder
```

457 ÷ 7 = 65 remainder 2

```
    __65__
7 | 457
     455
     ---
     2  ← remainder
```

457 ÷ 11 = 41 remainder 6

```
    __41__
11 | 457
     451
     ---
     6  ← remainder
```

457 ÷ 13 = 35 remainder 2

```
    __35__
13 | 457
     455
     ---
     2  ← remainder
```

457 ÷ 17 = 26 remainder 15

```
    __26__
17 | 457
     442
     ---
     15  ← remainder
```

457 ÷ 19 = 24 remainder 1

```
    __24__
19 | 457
     456
     ---
     1  ← remainder
```

P_{89} 461

461 ÷ 2 = 230 remainder 1

```
    __230__
2 | 461
     460
     ---
     1  ← remainder
```

461 ÷ 3 = 153 remainder 2

```
    __153__
3 | 461
     459
     ---
     2  ← remainder
```

461 ÷ 5 = 92 remainder 1

```
    __92__
5 | 461
     460
     ---
     1  ← remainder
```

461 ÷ 7 = 65 remainder 6

```
    __65__
7 | 461
     455
     ---
     6  ← remainder
```

461 ÷ 11 = 41 remainder 10

```
    __41__
11 | 461
     451
     ---
     10  ← remainder
```

461 ÷ 13 = 35 remainder 6

```
    __35__
13 | 461
     455
     ---
     6  ← remainder
```

461 ÷ 17 = 27 remainder 2

```
    __27__
17 | 461
     459
     ---
     2  ← remainder
```

461 ÷ 19 = 24 remainder 5

```
    __24__
19 | 461
     456
     ---
     5  ← remainder
```

P_{90} 463

463 ÷ 2 = 231 remainder 1

```
     __231__
2 | 463
     462
     ---
     1  ← remainder
```

463 ÷ 3 = 154 remainder 1

```
     __154__
3 | 463
     462
     ---
     1  ← remainder
```

463 ÷ 5 = 92 remainder 3

```
     __92__
5 | 463
     460
     ---
     3  ← remainder
```

463 ÷ 7 = 66 remainder 1

```
     __66__
7 | 463
     462
     ---
     1  ← remainder
```

463 ÷ 11 = 42 remainder 1

```
     __42__
11 | 463
     462
     ---
     1  ← remainder
```

463 ÷ 13 = 35 remainder 8

```
    __35__
13 | 463
     455
     ---
     8  ← remainder
```

463 ÷ 17 = 27 remainder 4

```
    __27__
17 | 463
     459
     ---
     4  ← remainder
```

463 ÷ 19 = 24 remainder 7

```
    __24__
19 | 463
     456
     ---
     7  ← remainder
```

P_{91} 467

467 ÷ 2 = 233 remainder 1

```
    __233__
2 | 467
     466
     ---
     1  ← remainder
```

467 ÷ 3 = 155 remainder 2

```
    __155__
3 | 467
     465
     ---
     2  ← remainder
```

467 ÷ 5 = 93 remainder 2

```
    __93__
5 | 467
     465
     ---
     2  ← remainder
```

467 ÷ 7 = 66 remainder 5

```
    __66__
7 | 467
     462
     ---
     5  ← remainder
```

467 ÷ 11 = 42 remainder 5

```
    __42__
11 | 467
     462
     ---
     5  ← remainder
```

467 ÷ 13 = 35 remainder 12

```
    __35__
13 | 467
     455
     ---
     12  ← remainder
```

467 ÷ 17 = 27 remainder 8

```
    __27__
17 | 467
     459
     ---
     8  ← remainder
```

467 ÷ 19 = 24 remainder 11

```
    __24__
19 | 467
     456
     ---
     11  ← remainder
```

P_{92} 479

479 ÷ 2 = 239 remainder 1

```
     __239__
2 | 479
     478
     ---
     1  ← remainder
```

479 ÷ 3 = 159 remainder 2

```
     __159__
3 | 479
     477
     ---
     2  ← remainder
```

479 ÷ 5 = 95 remainder 4

```
     __95__
5 | 479
     475
     ---
     4  ← remainder
```

479 ÷ 7 = 68 remainder 3

```
     __68__
7 | 479
     476
     ---
     3  ← remainder
```

479 ÷ 11 = 43 remainder 6

```
     __43__
11 | 479
     473
     ---
     6  ← remainder
```

479 ÷ 13 = 36 remainder 11

```
    __36__
13 | 479
     468
     ---
     11  ← remainder
```

479 ÷ 17 = 28 remainder 3

```
    __28__
17 | 479
     476
     ---
     3  ← remainder
```

479 ÷ 19 = 25 remainder 4

```
    __25__
19 | 479
     475
     ---
     4  ← remainder
```

P_{93} 487

487 ÷ 2 = 243 remainder 1

```
     __243__
2 | 487
     486
     ---
     1  ← remainder
```

487 ÷ 3 = 162 remainder 1

```
     __162__
3 | 487
     486
     ---
     1  ← remainder
```

487 ÷ 5 = 97 remainder 2

```
     __97__
5 | 487
     485
     ---
     2  ← remainder
```

487 ÷ 7 = 69 remainder 4

```
     __69__
7 | 487
     483
     ---
     4  ← remainder
```

487 ÷ 11 = 44 remainder 3

```
     __44__
11 | 487
     484
     ---
     3  ← remainder
```

487 ÷ 13 = 37 remainder 6

```
    __37__
13 | 487
     481
     ---
     6  ← remainder
```

487 ÷ 17 = 28 remainder 11

```
    __28__
17 | 487
     476
     ---
     11  ← remainder
```

487 ÷ 19 = 25 remainder 12

```
    __25__
19 | 487
     475
     ---
     12  ← remainder
```

P_{94} 491

491 ÷ 2 = 245 remainder 1

```
    __245__
2 | 491
     490
     ---
     1  ← remainder
```

491 ÷ 3 = 163 remainder 2

```
    __163__
3 | 491
     489
     ---
     2  ← remainder
```

491 ÷ 5 = 98 remainder 1

```
    __98__
5 | 491
     490
     ---
     1  ← remainder
```

491 ÷ 7 = 70 remainder 1

```
    __70__
7 | 491
     490
     ---
     1  ← remainder
```

491 ÷ 11 = 44 remainder 7

```
    __44__
11 | 491
     484
     ---
     7  ← remainder
```

491 ÷ 13 = 37 remainder 10

```
    __37__
13 | 491
     481
     ---
     10  ← remainder
```

491 ÷ 17 = 28 remainder 15

```
    __28__
17 | 491
     476
     ---
     15  ← remainder
```

491 ÷ 19 = 25 remainder 16

```
    __25__
19 | 491
     475
     ---
     16  ← remainder
```

P_{95} 499

499 ÷ 2 = 249 remainder 1

```
    __249__
2 | 499
     498
     ---
     1  ← remainder
```

499 ÷ 3 = 166 remainder 1

```
    __166__
3 | 499
     498
     ---
     1  ← remainder
```

499 ÷ 5 = 99 remainder 4

```
    __99__
5 | 499
     495
     ---
     4  ← remainder
```

499 ÷ 7 = 71 remainder 2

```
    __71__
7 | 499
     497
     ---
     2  ← remainder
```

499 ÷ 11 = 45 remainder 4

```
    __45__
11 | 499
     495
     ---
     4  ← remainder
```

499 ÷ 13 = 38 remainder 5

```
    __38__
13 | 499
     494
     ---
     5  ← remainder
```

499 ÷ 17 = 29 remainder 6

```
    __29__
17 | 499
     493
     ---
     6  ← remainder
```

499 ÷ 19 = 26 remainder 5

```
    __26__
19 | 499
     494
     ---
     5  ← remainder
```

P_{96} 503

503 ÷ 2 = 251 remainder 1

```
     __251__
2 | 503
     502
     ---
     1  ← remainder
```

503 ÷ 3 = 167 remainder 2

```
     __167__
3 | 503
     501
     ---
     2  ← remainder
```

503 ÷ 5 = 100 remainder 3

```
     __100__
5 | 503
     500
     ---
     3  ← remainder
```

503 ÷ 7 = 71 remainder 6

```
     __71__
7 | 503
     497
     ---
     6  ← remainder
```

503 ÷ 11 = 45 remainder 8

```
     __45__
11 | 503
     495
     ---
     8  ← remainder
```

503 ÷ 13 = 38 remainder 9

```
    __38__
13 | 503
     494
     ---
     9  ← remainder
```

503 ÷ 17 = 29 remainder 10

```
    __29__
17 | 503
     493
     ---
     10  ← remainder
```

503 ÷ 19 = 26 remainder 9

```
    __26__
19 | 503
     494
     ---
     9  ← remainder
```

P_{97} 509

509 ÷ 2 = 254 remainder 1

```
     __254__
2 | 509
     508
     ---
     1  ← remainder
```

509 ÷ 3 = 169 remainder 2

```
     __169__
3 | 509
     507
     ---
     2  ← remainder
```

509 ÷ 5 = 101 remainder 4

```
     __101__
5 | 509
     505
     ---
     4  ← remainder
```

509 ÷ 7 = 72 remainder 5

```
     __72__
7 | 509
     504
     ---
     5  ← remainder
```

509 ÷ 11 = 46 remainder 3

```
     __46__
11 | 509
     506
     ---
     3  ← remainder
```

509 ÷ 13 = 39 remainder 2

```
    __39__
13 | 509
     507
     ---
     2  ← remainder
```

509 ÷ 17 = 29 remainder 16

```
    __29__
17 | 509
     493
     ---
     16  ← remainder
```

509 ÷ 19 = 26 remainder 15

```
    __26__
19 | 509
     494
     ---
     15  ← remainder
```

P_{98} 521

521 ÷ 2 = 260 remainder 1

```
     __260__
2 | 521
     520
     ---
     1  ← remainder
```

521 ÷ 3 = 173 remainder 2

```
     __173__
3 | 521
     519
     ---
     2  ← remainder
```

521 ÷ 5 = 104 remainder 1

```
     __104__
5 | 521
     520
     ---
     1  ← remainder
```

521 ÷ 7 = 74 remainder 3

```
     __74__
7 | 521
     518
     ---
     3  ← remainder
```

521 ÷ 11 = 47 remainder 4

```
     __47__
11 | 521
     517
     ---
     4  ← remainder
```

521 ÷ 13 = 40 remainder 1

```
    __40__
13 | 521
     520
     ---
     1  ← remainder
```

521 ÷ 17 = 30 remainder 11

```
    __30__
17 | 521
     510
     ---
     11  ← remainder
```

521 ÷ 19 = 27 remainder 8

```
    __27__
19 | 521
     513
     ---
     8  ← remainder
```

P_{99} 523

523 ÷ 2 = 261 remainder 1

```
     __261__
2 | 523
     522
     ---
     1  ← remainder
```

523 ÷ 3 = 174 remainder 1

```
     __174__
3 | 523
     522
     ---
     1  ← remainder
```

523 ÷ 5 = 104 remainder 3

```
     __104__
5 | 523
     520
     ---
     3  ← remainder
```

523 ÷ 7 = 74 remainder 5

```
     __74__
7 | 523
     518
     ---
     5  ← remainder
```

523 ÷ 11 = 47 remainder 6

```
     __47__
11 | 523
     517
     ---
     6  ← remainder
```

523 ÷ 13 = 40 remainder 3

```
    __40__
13 | 523
     520
     ---
     3  ← remainder
```

523 ÷ 17 = 30 remainder 13

```
    __30__
17 | 523
     510
     ---
     13  ← remainder
```

523 ÷ 19 = 27 remainder 10

```
    __27__
19 | 523
     513
     ---
     10  ← remainder
```

P_{100} 541

541 ÷ 2 = 270 remainder 1

```
     __270__
2 | 541
     540
     ---
     1  ← remainder
```

541 ÷ 3 = 180 remainder 1

```
     __180__
3 | 541
     540
     ---
     1  ← remainder
```

541 ÷ 5 = 108 remainder 1

```
     __108__
5 | 541
     540
     ---
     1  ← remainder
```

541 ÷ 7 = 77 remainder 2

```
     __77__
7 | 541
     539
     ---
     2  ← remainder
```

541 ÷ 11 = 49 remainder 2

```
     __49__
11 | 541
     539
     ---
     2  ← remainder
```

541 ÷ 13 = 41 remainder 8

```
    __41__
13 | 541
     533
     ---
     8  ← remainder
```

541 ÷ 17 = 31 remainder 14

```
    __31__
17 | 541
     527
     ---
     14  ← remainder
```

541 ÷ 19 = 28 remainder 9

```
    __28__
19 | 541
     532
     ---
     9  ← remainder
```

541 ÷ 23 = 23 remainder 12

```
    __23__
23 | 541
     529
     ---
     12  ← remainder
```