Mathemagical Numbers 100 to 199

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. Our first two mathemagical number books are:

Mathemagical Numbers 1 to 99

Mathemagical Numbers 100 to 199

Every natural number has interesting properties, In this unit you will find

odd numbers and even numbers

prime numbers, emirps, and palprimes

composite numbers and prime factorizations of composite numbers

factors and proper factors

sums of factors and sums of proper factors

deficient numbers, perfect numbers, and abundant numbers

square numbers and cubic numbers

triangular numbers and factorial numbers

Fibonacci numbers

palindromic numbers

number of protons in an atom

Visit the glossary to see definitions of the above types of numbers.

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Mathemagical Numbers 100 to 199

100 (one hundred) | TOC

100 is a natural number.
100 is the successor of 99.
100 is the predecessor of 101.
100 is an even number.
100 is a composite number.
Prime factorization: 100 = 2 x 2 x 5 x 5
Factors of 100: 1, 2, 4, 5, 10, 20, 25, 50, 100
Proper factors of 100: 1, 2, 4, 5, 10, 20, 25, 50
Sum of factors of 100 = 217
Sum of proper factors of 100 = 117
100 is an abundant number.
100 is a square number. 100 = 10 x 10 = 10^2
100 is the sum of the first 10 odd numbers. 100 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19
100 is the sum of the first 9 prime numbers. 100 = 2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23
100 is the sum of the first 4 cubic numbers. 100 = 1 + 8 + 27 + 64
100 centimeters = 1 meter
A Zocchihedron has 100 faces. [See http://en.wikipedia.org/wiki/Zocchihedron]
A fermium (Fm) atom has 100 protons.

101 (one hundred one)

101 is a natural number.
101 is the successor of 100.
101 is the predecessor of 102.
101 is an odd number.
101 is a prime number.
101 is a palprime.
Factors of 101: 1, 101
Proper factor of 101: 1
Sum of factors of 101 = 102
Sum of proper factors of 101 = 1
101 is a deficient number.
101 is a palindromic number.
A mendelevium (Md) atom has 101 protons.

102 (one hundred two)

102 is a natural number.
102 is the successor of 101.
102 is the predecessor of 103.
102 is an even number.
102 is a composite number.
Prime factorization: 102 = 2 x 3 x 17

Factors of 102: 1, 2, 3, 6, 17, 34, 51, 102
Proper factors of 102: 1, 2, 3, 6, 17, 34, 51
Sum of factors of 102 = 216
Sum of proper factors of 102 = 114
102 is an abundant number.
A nobelium (No) atom has 102 protons.

103 (one hundred three)

103 is a natural number.
103 is the successor of 102.
103 is the predecessor of 104.
103 is an odd number.
103 is a prime number.
Factors of 103: 1, 103
Proper factor of 103: 1
Sum of factors of 103 = 104
Sum of proper factors of 103 = 1
103 is a deficient number.
A lawrencium (Lr) atom has 103 protons.

104 (one hundred four)

104 is a natural number.
104 is the successor of 103.
104 is the predecessor of 105.
104 is an even number.
104 is a composite number.
Prime factorization: 104 = 2 x 2 x 2 x 13
Factors of 104: 1, 2, 4, 8, 13, 26, 52, 104
Proper factors of 104: 1, 2, 4, 8, 13, 26, 52
Sum of factors of 104 = 210
Sum of proper factors of 104 = 106
104 is an abundant number.
A rutherfordium (Rf) atom has 104 protons.

105 (one hundred five)

105 is a natural number.
105 is the successor of 104.
105 is the predecessor of 106.
105 is an odd number.
105 is a composite number.
Prime factorization: 105 = 3 x 5 x 7
Factors of 105: 1, 3, 5, 7, 15, 21, 35, 105
Proper factors of 105: 1, 3, 5, 7, 15, 21, 35
Sum of factors of 105 = 192
Sum of proper factors of 105 = 87

105 is a deficient number.
105 is a triangular number. 105 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14
A dubnium (Db) atom has 105 protons.

106 (one hundred six)

106 is a natural number.
106 is the successor of 105.
106 is the predecessor of 107.
106 is an even number.
106 is a composite number.
Prime factorization: 106 = 2 x 53
Factors of 106: 1, 2, 53, 106
Proper factors of 106: 1, 2, 53
Sum of factors of 106 = 162
Sum of proper factors of 106 = 56
106 is a deficient number.
A seaborgium (Sg) atom has 106 protons.

107 (one hundred seven)

107 is a natural number.
107 is the successor of 106.
107 is the predecessor of 108.
107 is an odd number.
107 is a prime number
107 is an emirp. (701 is a prime number.)
Factors of 107: 1, 107
Proper factor of 107: 1
Sum of factors of 107 = 108
Sum of proper factors of 107 = 1
107 is a deficient number.
A bohrium (Bh) atom has 107 protons.

108 (one hundred eight)

108 is a natural number.
108 is the successor of 107.
108 is the predecessor of 109.
108 is an even number.
108 is a composite number.
Prime factorization: 108 = 2 x 2 x 3 x 3 x 3
Factors of 108: 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108
Proper factors of 108: 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54
Sum of factors of 108 = 280
Sum of proper factors of 108 = 172
108 is an abundant number.
A hassium (Hs) atom has 108 protons.

109 (one hundred nine)

109 is a natural number.
109 is the successor of 108.
109 is the predecessor of 110.
109 is an odd number.
109 is a prime number.
Factors of 109: 1, 109
Proper factor of 109: 1
Sum of factors of 109 = 110
Sum of proper factors of 109 = 1
109 is a deficient number.
A meitnerium (Mt) atom has 109 protons.

110 (one hundred ten) | TOC

110 is a natural number.
110 is the successor of 109.
110 is the predecessor of 111.
110 is an even number.
110 is a composite number.
Prime factorization: 110 = 2 x 5 x 11
Factors of 110: 1, 2, 5 10, 11, 22, 55, 110
Proper factors of 110: 1, 2, 5 10, 11, 22, 55
Sum of factors of 110 = 216
Sum of proper factors of 110 = 106
110 is a deficient number.
A darmstadtium (Ds) atom has 110 protons.

111 (one hundred eleven)

111 is a natural number.
111 is the successor of 110.
111 is the predecessor of 112.
111 is an odd number.
111 is a composite number.
Prime factorization: 111 = 3 x 37
Factors of 111: 1, 3, 37, 111
Proper factors of 111: 1, 3, 37
Sum of factors of 111 = 152
Sum of proper factors of 111 = 41
111 is a deficient number.
111 is a palindromic number.
A roentgenium (Rg) atom has 111 protons.

112 (one hundred twelve)

112 is a natural number.

112 is the successor of 111.
112 is the predecessor of 113.
112 is an even number.
112 is a composite number.
Prime factorization: 112 = 2 x 2 x 2 x 2 x 7
Factors of 112: 1, 2, 4, 7, 8, 14, 16, 28, 56, 112
Proper factors of 112: 1, 2, 4, 7, 8, 14, 16, 28, 56
Sum of factors of 112 = 248
Sum of proper factors of 112 = 136
112 is an abundant number.

113 (one hundred thirteen)

113 is a natural number.
113 is the successor of 112.
113 is the predecessor of 114.
113 is an odd number.
113 is a prime number.
113 is an emirp. (311 is a prime number.)
Factors of 113: 1, 113
Proper factor of 113: 1
Sum of factors of 113 = 114
Sum of proper factors of 113 = 1
113 is a deficient number.

114 (one hundred fourteen)

114 is a natural number.
114 is the successor of 113.
114 is the predecessor of 115.
114 is an even number.
114 is a composite number.
Prime factorization: 114 = 2 x 3 x 19
Factors of 114: 1, 2, 3, 6, 19, 38, 57, 114
Proper factors of 114: 1, 2, 3, 6, 19, 38, 57
Sum of factors of 114 = 240
Sum of proper factors of 114 = 126
114 is an abundant number.

115 (one hundred fifteen)

115 is a natural number.
115 is the successor of 114.
115 is the predecessor of 116.
115 is an odd number.
115 is a composite number.
Prime factorization: 115 = 5 x 23
Factors of 115: 1, 5, 23, 115

Proper factors of 115: 1, 5, 23
Sum of factors of 115 = 144
Sum of proper factors of 115 = 29
115 is a deficient number.

116 (one hundred sixteen)

116 is a natural number.
116 is the successor of 115.
116 is the predecessor of 117.
116 is an even number.
116 is a composite number.
Prime factorization: 116 = 2 x 2 x 29
Factors of 116: 1, 2, 4, 29, 58, 116
Proper factors of 116: 1, 2, 4, 29, 58
Sum of factors of 116 = 210
Sum of proper factors of 116 = 94
116 is a deficient number.

117 (one hundred seventeen)

117 is a natural number.
117 is the successor of 116.
117 is the predecessor of 118.
117 is an odd number.
117 is a composite number.
Prime factorization: 117 = 3 x 3 x 13
Factors of 117: 1, 3, 9, 13, 39, 117
Proper factors of 117: 1, 3, 9, 13, 39
Sum of factors of 117 = 182
Sum of proper factors of 117 = 65
117 is a deficient number.

118 (one hundred eight)

118 is a natural number.
118 is the successor of 117.
118 is the predecessor of 119.
118 is an even number.
118 is a composite number.
Prime factorization: 118 = 2 x 59
Factors of 118: 1, 2, 59, 118
Proper factors of 118: 1, 2, 59
Sum of factors of 118 = 180
Sum of proper factors of 118 = 62
118 is a deficient number.

119 (one hundred nineteen)

119 is a natural number.
119 is the successor of 118.
119 is the predecessor of 120.
119 is an odd number.
119 is a composite number.
Prime factorization: 119 = 7 x 17
Factors of 119: 1, 7, 17, 119
Proper factors of 119: 1, 7, 17
Sum of factors of 119 = 144
Sum of proper factors of 119 = 25
119 is a deficient number.

120 (one hundred twenty) | TOC

120 is a natural number.
120 is the successor of 119.
120 is the predecessor of 121.
120 is an even number.
120 is a composite number.
Prime factorization: 120 = 2 x 2 x 2 x 3 x 5
Factors of 120: 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120
120 is the least number that has exactly 16 factors.
Proper factors of 120: 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60
120 is the least number that has exactly 15 proper factors.
Sum of factors of 120 = 360
120 is the least number such that: sum of factors = 3 times the number.
Sum of factors = 3 x 120
Sum of proper factors of 120 = 240
120 is the least number such that: sum of proper factors = 2 times the number.
Sum of proper factors = 2 x 120
120 is an abundant number.
120 is a triangular number.
120 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15
120 is a factorial number. 120 = 5! = 1 x 2 x 3 x 4 x 5

121 (one hundred twenty one)

121 is a natural number.
121 is the successor of 120.
121 is the predecessor of 122.
121 is an odd number.
121 is a composite number.
Prime factorization: 121 = 11 x 11
Factors of 121: 1, 11, 121
Proper factors of 121: 1, 11
Sum of factors of 121 = 133
Sum of proper factors of 121 = 12
121 is a deficient number.

121 is a square number. $121 = 11 \times 11 = 11^2$
121 is the sum of the first 11 odd numbers.
$121 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21$
121 is a palindromic number.

122 (one hundred twenty two)

122 is a natural number.
122 is the successor of 121.
122 is the predecessor of 123.
122 is an even number.
122 is a composite number.
Prime factorization: $122 = 2 \times 61$
Factors of 122: 1, 2, 61, 122
Proper factors of 122: 1, 2, 61
Sum of factors of 122 = 186
Sum of proper factors of 122 = 64
122 is a deficient number.

123 (one hundred twenty three)

123 is a natural number.
123 is the successor of 122.
123 is the predecessor of 124.
123 is an odd number.
123 is a composite number.
Prime factorization: $123 = 3 \times 41$
Factors of 123: 1, 3, 41, 123
Proper factors of 123: 1, 3, 41
Sum of factors of 123 = 168
Sum of proper factors of 123 = 45
123 is a deficient number.

124 (one hundred twenty four)

124 is a natural number.
124 is the successor of 123.
124 is the predecessor of 125.
124 is an even number.
124 is a composite number.
Prime factorization: $124 = 2 \times 2 \times 31$
Factors of 124: 1, 2, 4, 31, 62, 124
Proper factors of 124: 1, 2, 4, 31, 62
Sum of factors of 124 = 224
Sum of proper factors of 124 = 100
124 is a deficient number.

125 (one hundred twenty five)

125 is a natural number.
125 is the successor of 124.
125 is the predecessor of 126.
125 is an odd number.
125 is a composite number.
Prime factorization: 125 = 5 x 5 x 5
Factors of 125: 1, 5, 25, 125
Proper factors of 125: 1, 5, 25
Sum of factors of 125 = 156
Sum of proper factors of 125 = 31
125 is a deficient number.
125 is a cubic number. 125 = 5 x 5 x 5 = 5^3

126 (one hundred twenty six)

126 is a natural number.
126 is the successor of 125.
126 is the predecessor of 127.
126 is an even number.
126 is a composite number
Prime factorization: 126 = 2 x 3 x 3 x 7
Factors of 126: 1, 2, 3, 6, 7, 9, 14, 18, 21, 42, 63, 126
Proper factors of 126: 1, 2, 3, 6, 7, 9, 14, 18, 21, 42, 63
Sum of factors of 126 = 312
Sum of proper factors of 126 = 186
126 is an abundant number.

127 (one hundred twenty seven)

127 is a natural number.
127 is the successor of 126.
127 is the predecessor of 128.
127 is an odd number.
127 is a prime number.
Factors of 127: 1, 127
Proper factor of 127: 1
Sum of factors of 127 = 128
Sum of proper factors of 127 = 1
127 is a deficient number.

128 (one hundred twenty eight)

128 is a natural number.
128 is the successor of 127.
128 is the predecessor of 129.
128 is an even number.
128 is a composite number.
Prime factorization: 128 = 2 x 2 x 2 x 2 x 2 x 2 x 2

Factors of 128: 1, 2, 4, 8, 16, 32, 64, 128
Proper factors of 128: 1, 2, 4, 8, 16, 32, 64
Sum of factors of 128 = 255
Sum of proper factors of 128 = 127
128 is a deficient number.
128 is a power of 2. $128 = 2^7$

129 (one hundred twenty nine)

129 is a natural number.
129 is the successor of 128.
129 is the predecessor of 130.
129 is an odd number.
129 is a composite number.
Prime factorization: 129 = 3 x 43
Factors of 129: 1, 3, 43, 129
Proper factors of 129: 1, 3, 43
Sum of factors of 129 = 176
Sum of proper factors of 129 = 47
129 is a deficient number.
129 is the sum of the first 10 prime numbers.
129 = 2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29

130 (one hundred thirty) | TOC

130 is a natural number.
130 is the successor of 129.
130 is the predecessor of 131.
130 is an even number.
130 is a composite number.
Prime factorization: 130 = 2 x 5 x 13
Factors of 130: 1, 2, 5, 10, 13, 26, 65, 130
Proper factors of 130: 1, 2, 5, 10, 13, 26, 65
Sum of factors of 130 = 252
Sum of proper factors of 130 = 122
130 is a deficient number.

131 (one hundred thirty one)

131 is a natural number.
131 is the successor of 130.
131 is the predecessor of 132.
131 is an odd number.
131 is a prime number.
131 is a palprime.
Factors of 131: 1, 131
Proper factor of 131: 1
Sum of factors of 131 = 132

Sum of proper factors of 131 = 1
131 is a deficient number.
131 is a palindromic number.

132 (one hundred thirty two)

132 is a natural number.
132 is the successor of 131.
132 is the predecessor of 133.
132 is an even number.
132 is a composite number.
Prime factorization: 132 = 2 x 2 x 3 x 11
Factors of 132: 1, 2, 3, 4, 6, 11, 12, 22, 33, 44, 66, 132
Proper factors of 132: 1, 2, 3, 4, 6, 11, 12, 22, 33, 44, 66
Sum of factors of 132 = 336
Sum of proper factors of 132 = 204
132 is an abundant number.

133 (one hundred thirty three)

133 is a natural number.
133 is the successor of 132.
133 is the predecessor of 134.
133 is an odd number.
133 is a composite number.
Prime factorization: 133 = 7 x 19
Factors of 133: 1, 7, 19, 133
Proper factors of 133: 1, 7, 19
Sum of factors of 133 = 160
Sum of proper factors of 133 = 27
133 is a deficient number.

134 (one hundred thirty four)

134 is a natural number.
134 is the successor of 133.
134 is the predecessor of 135.
134 is an even number.
134 is a composite number.
Prime factorization: 134 = 2 x 67
Factors of 134: 1, 2, 67, 134
Proper factors of 134: 1, 2, 67
Sum of factors of 134 = 204
Sum of proper factors of 134 = 70
134 is a deficient number.

135 (one hundred thirty five)

135 is a natural number.

135 is the successor of 134.
135 is the predecessor of 136.
135 is an odd number.
135 is a composite number.
Prime factorization: 135 = 3 x 3 x 3 x 5
Factors of 135: 1, 3, 5, 9, 15, 27, 45, 135
Proper factors of 135: 1, 3, 5, 9, 15, 27, 45
Sum of factors of 135 = 240
Sum of proper factors of 135 = 105
135 is a deficient number.

136 (one hundred thirty six)

136 is a natural number.
136 is the successor of 135.
136 is the predecessor of 137.
136 is an even number.
136 is a composite number.
Prime factorization: 136 = 2 x 2 x 2 x 17
Factors of 136: 1, 2, 4, 8, 17, 34, 68, 136
Proper factors of 136: 1, 2, 4, 8, 17, 34, 68
Sum of factors of 136 = 270
Sum of proper factors of 136 = 134
136 is a deficient number.
136 is a triangular number.
136 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16

137 (one hundred thirty seven)

137 is a natural number.
137 is the successor of 136.
137 is the predecessor of 138.
137 is an odd number.
137 is a prime number.
Factors of 137: 1, 137
Proper factor of 137: 1
Sum of factors of 137 = 138
Sum of proper factors of 137 = 1
137 is a deficient number.

138 (one hundred thirty eight)

138 is a natural number.
138 is the successor of 137.
138 is the predecessor of 139.
138 is an even number.
138 is a composite number.
Prime factorization: 138 = 2 x 3 x 23

Factors of 138: 1, 2, 3, 6, 23, 46, 69, 138
Proper factors of 138: 1, 2, 3, 6, 23, 46, 69
Sum of factors of 138 = 288
Sum of proper factors of 138 = 150
138 is a deficient number.

139 (one hundred thirty nine)

139 is a natural number.
139 is the successor of 138.
139 is the predecessor of 140.
139 is an odd number.
139 is a prime number.
Factors of 139: 1, 139
Proper factor of 139: 1
Sum of factors of 139 = 140
Sum of proper factors of 139 = 1
139 is a deficient number.

140 (one hundred forty) | TOC

140 is a natural number.
140 is the successor of 139.
140 is the predecessor of 141.
140 is an even number.
140 is a composite number.
Prime factorization: 140 = 2 x 2 x 5 x 7
Factors of 140: 1, 2, 4, 5, 7, 10, 14, 20, 28, 35, 70, 140
Proper factors of 140: 1, 2, 4, 5, 7, 10, 14, 20, 28, 35, 70
Sum of factors of 140 = 336
Sum of proper factors of 140 = 196
140 is an abundant number.
140 is the sum of the first 7 square numbers. 140 = 1 + 4 + 9 + 16 + 25 + 36 + 49

141 (one hundred forty one)

141 is a natural number.
141 is the successor of 140.
141 is the predecessor of 142.
141 is an odd number.
141 is a composite number.
Prime factorization: 141 = 3 x 47
Factors of 141: 1, 3, 47, 141
Proper factors of 141: 1, 3, 47
Sum of factors of 141 = 192
Sum of proper factors of 141 = 51
141 is a deficient number.
141 is a palindromic number.

142 (one hundred forty two)

142 is a natural number.
142 is the successor of 141.
142 is the predecessor of 143.
142 is an even number.
142 is a composite number.
Prime factorization: 142 = 2 x 71
Factors of 142: 1, 2, 71, 142
Proper factors of 142: 1, 2, 71
Sum of factors of 142 = 216
Sum of proper factors of 142 = 74
142 is a deficient number.

143 (one hundred forty three)

143 is a natural number.
143 is the successor of 142.
143 is the predecessor of 144.
143 is an odd number.
143 is a composite number.
Prime factorization: 143 = 11 x 13
Factors of 143: 1, 11, 13, 143
Proper factors of 143: 1, 11, 13
Sum of factors of 143 = 168
Sum of proper factors of 143 = 25
143 is a deficient number.

144 (one hundred forty four)

144 is a natural number.
144 is the successor of 143.
144 is the predecessor of 145.
144 is an even number.
144 is a composite number.
Prime factorization: 144 = 2 x 2 x 2 x 2 x 3 x 3
Factors of 144: 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144
Proper factors of 144: 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72
Sum of factors of 144 = 403
Sum of proper factors of 144 = 259
144 is an abundant number.
144 is a square number. $144 = 12 \times 12 = 12^2$
144 is the sum of the first 12 odd numbers.
$144 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23$
144 is a Fibonacci number.

145 (one hundred forty five)

145 is a natural number.
145 is the successor of 144.
145 is the predecessor of 146.
145 is an odd number.
145 is a composite number.
Prime factorization: 145 = 5 x 29
Factors of 145: 1, 5, 29, 145
Proper factors of 145: 1, 5, 29
Sum of factors of 145 = 180
Sum of proper factors of 145 = 35
145 is a deficient number.

146 (one hundred forty six)

146 is a natural number.
146 is the successor of 145.
146 is the predecessor of 147.
146 is an even number.
146 is a composite number.
Prime factorization: 146 = 2 x 73
Factors of 146: 1, 2, 73, 146
Proper factors of 146: 1, 2, 73
Sum of factors of 146 = 222
Sum of proper factors of 146 = 76
146 is a deficient number.

147 (one hundred forty seven)

147 is a natural number.
147 is the successor of 146.
147 is the predecessor of 148.
147 is an odd number.
147 is a composite number.
Prime factorization: 147 = 3 x 7 x 7
Factors of 147: 1, 3, 7, 21, 49, 147
Proper factors of 147: 1, 3, 7, 21, 49
Sum of factors of 147 = 228
Sum of proper factors of 147 = 81
147 is a deficient number.

148 (one hundred forty eight)

148 is a natural number.
148 is the successor of 147.
148 is the predecessor of 149.
148 is an even number.
148 is a composite number.
Prime factorization: 148 = 2 x 2 x 37

Factors of 148: 1, 2, 4, 37, 74, 148
Proper factors of 148: 1, 2, 4, 37, 74
Sum of factors of 148 = 266
Sum of proper factors of 148 = 118
148 is a deficient number.

149 (one hundred forty nine)

149 is a natural number.
149 is the successor of 148.
149 is the predecessor of 150.
149 is an odd number.
149 is a prime number.
149 is an emirp. (941 is a prime number.)
Factors of 149: 1, 149
Proper factor of 149: 1
Sum of factors of 149 = 150
Sum of proper factors of 149 = 1
149 is a deficient number.

150 (one hundred fifty) | TOC

150 is a natural number.
150 is the successor of 149.
150 is the predecessor of 151.
150 is an even number.
150 is a composite number.
Prime factorization: 150 = 2 x 3 x 5 x 5
Factors of 150: 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150
Proper factors of 150: 1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75
Sum of factors of 150 = 372
Sum of proper factors of 150 = 222
150 is an abundant number.

151 (one hundred fifty one)

151 is a natural number.
151 is the successor of 150.
151 is the predecessor of 152.
151 is an odd number.
151 is a prime number.
151 is a palprime.
Factors of 151: 1, 151
Proper factor of 151: 1
Sum of factors of 151 = 152
Sum of proper factors of 151 = 1
151 is a deficient number.
151 is a palindromic number.

152 (one hundred fifty two)

152 is a natural number.
152 is the successor of 151.
152 is the predecessor of 153.
152 is an even number.
152 is a composite number.
Prime factorization: 152 = 2 x 2 x 2 x 19
Factors of 152: 1, 2, 4, 8, 19, 38, 76, 152
Proper factors 152: 1, 2, 4, 8, 19, 38, 76
Sum of factors of 152 = 300
Sum of proper factors of 152 = 148
152 is a deficient number.

153 (one hundred fifty three)

153 is a natural number.
153 is the successor of 152.
153 is the predecessor of 154.
153 is an odd number.
153 is a composite number.
Prime factorization: 153 = 3 x 3 x 17
Factors of 153: 1, 3, 9, 17, 51, 153
Proper factors of 153: 1, 3, 9, 17, 51
Sum of factors of 153 = 234
Sum of proper factors of 153 = 81
153 is a deficient number.
153 is a triangular number.
153 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17
153 is equal to the sum of the cubes of its digits. $153 = 1^3 + 5^3 + 3^3$

154 (one hundred fifty four)

154 is a natural number.
154 is the successor of 153.
154 is the predecessor of 155.
154 is an even number.
154 is a composite number.
Prime factorization: 154 = 2 x 7 x 11
Factors of 154: 1, 2, 7, 11, 14, 22, 77, 154
Proper factors of 154: 1, 2, 7, 11, 14, 22, 77
Sum of factors of 154 = 288
Sum of proper factors of 154 = 134
154 is a deficient number.

155 (one hundred fifty five)

155 is a natural number.

155 is the successor of 154.
155 is the predecessor of 156.
155 is an odd number.
155 is a composite number.
Prime factorization: 155 = 5 x 31
Factors of 155: 1, 5, 31, 155
Proper factors of 155: 1, 5, 31
Sum of factors of 155 = 192
Sum of proper factors of 155 = 37
155 is a deficient number.

156 (one hundred fifty six)

156 is a natural number.
156 is the successor of 155.
156 is the predecessor of 157.
156 is an even number.
156 is a composite number.
Prime factorization: 156 = 2 x 2 x 3 x 13
Factors of 156: 1, 2, 3, 4, 6, 12, 13, 26, 39, 52, 78, 156
Proper factors of 156: 1, 2, 3, 4, 6, 12, 13, 26, 39, 52, 78
Sum of factors of 156 = 392
Sum of proper factors of 156 = 236
156 is an abundant number.

157 (one hundred fifty seven)

157 is a natural number.
157 is the successor of 156.
157 is the predecessor of 158.
157 is an odd number.
157 is a prime number.
157 is an emirp. (751 is a prime number.)
Factors of 157: 1, 157
Proper factor of 157: 1
Sum of factors of 157 = 158
Sum of proper factors of 157 = 1
157 is a deficient number.

158 (one hundred fifty eight)

158 is a natural number.
158 is the successor of 157.
158 is the predecessor of 159.
158 is an even number.
158 is a composite number.
Prime factorization: 158 = 2 x 79
Factors of 158: 1, 2, 79, 158

Proper factors of 158: 1, 2, 79
Sum of factors of 158 = 240
Sum of proper factors of 158 = 82
158 is a deficient number.

159 (one hundred fifty nine)

159 is a natural number.
159 is the successor of 158.
159 is the predecessor of 160.
159 is an odd number.
159 is a composite number.
Prime factorization: 159 = 3 x 53
Factors of 159: 1, 3, 53, 159
Proper factors of 159: 1, 3, 53
Sum of factors of 159 = 216
Sum of proper factors of 159 = 57
159 is a deficient number.

160 (one hundred sixty) | TOC

160 is a natural number.
160 is the successor of 159.
160 is the predecessor of 161.
160 is an even number.
160 is a composite number.
Prime factorization: 160 = 2 x 2 x 2 x 2 x 2 x 5
Factors of 160: 1, 2, 4, 5, 8, 10, 16, 20, 32, 40, 80, 160
Proper factors of 160: 1, 2, 4, 5, 8, 10, 16, 20, 32, 40, 80
Sum of factors of 160 = 378
Sum of proper factors of 160 = 218
160 is an abundant number.
160 is the sum of the first 11 prime numbers.
160 = 2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31

161 (one hundred sixty one)

161 is a natural number.
161 is the successor of 160.
161 is the predecessor of 162.
161 is an odd number.
161 is a composite number.
Prime factorization: 161 = 7 x 23
Factors of 161: 1, 7, 23, 161
Proper factors of 161: 1, 7, 23
Sum of factors of 161 = 192
Sum of proper factors of 161 = 31
161 is a deficient number.

161 is a palindromic number.

162 (one hundred sixty two)

162 is a natural number.
162 is the successor of 161.
162 is the predecessor of 163.
162 is an even number.
162 is a composite number.
Prime factorization: 162 = 2 x 3 x 3 x 3 x 3
Factors of 162: 1, 2, 3, 6, 9, 18, 27, 54, 81, 162
Proper factors of 162: 1, 2, 3, 6, 9, 18, 27, 54, 81
Sum of factors of 162 = 363
Sum of proper factors of 162 = 201
162 is an abundant number.

163 (one hundred sixty three)

163 is a natural number.
163 is the successor of 162.
163 is the predecessor of 164.
163 is an odd number.
163 is a prime number.
Factors of 163: 1, 163
Proper factor of 163: 1
Sum of factors of 163 = 164
Sum of proper factors of 163 = 1
163 is a deficient number.

164 (one hundred sixty four)

164 is a natural number.
164 is the successor of 163.
164 is the predecessor of 165.
164 is an even number.
164 is a composite number.
Prime factorization: 164 = 2 x 2 x 41
Factors of 164: 1, 2, 4, 41, 82, 164
Proper factors of 164: 1, 2, 4, 41, 82
Sum of factors of 164 = 294
Sum of proper factors of 164 = 130
164 is a deficient number.

165 (one hundred sixty five)

165 is a natural number.
165 is the successor of 164.
165 is the predecessor of 166.
165 is an odd number.

165 is a composite number.
Prime factorization: 165 = 3 x 5 x 11
Factors of 165: 1, 3, 5, 11, 15, 33, 55, 165
Proper factors of 165: 1, 3, 5, 11, 15, 33, 55
Sum of factors of 165 = 288
Sum of proper factors of 165 = 123
165 is a deficient number.

166 (one hundred sixty six)

166 is a natural number.
166 is the successor of 165.
166 is the predecessor of 167.
166 is an even number.
166 is a composite number.
Prime factorization: 166 = 2 x 83
Factors of 166: 1, 2, 83, 166
Proper factors of 166: 1, 2, 83
Sum of factors of 166 = 252
Sum of proper factors of 166 = 86
166 is a deficient number.

167 (one hundred sixty seven)

167 is a natural number.
167 is the successor of 166.
167 is the predecessor of 168.
167 is an odd number.
167 is a prime number.
167 is an emirp. (761 is a prime number.)
Factors of 176: 1, 167
Proper factor of 167: 1
Sum of factors of 167 = 168
Sum of proper factors of 167 = 1
167 is a deficient number.

168 (one hundred sixty eight)

168 is a natural number.
168 is the successor of 167.
168 is the predecessor of 169.
168 is an even number.
168 is a composite number.
Prime factorization: 168 = 2 x 2 x 2 x 3 x 7
Factors of 168: 1, 2, 3, 4, 6, 7, 8, 12, 14, 21, 24, 28, 42, 56, 84, 168
Proper factors of 168: 1, 2, 3, 4, 6, 7, 8, 12, 14, 21, 24, 28, 42, 56, 84
Sum of factors of 168 = 480
Sum of proper factors of 168 = 312

168 is an abundant number.

169 (one hundred sixty nine)

169 is a natural number.
169 is the successor of 168.
169 is the predecessor of 170.
169 is an odd number.
169 is a composite number.
Prime factorization: 169 = 13 x 13
Factors of 169: 1, 13, 169
Proper factors of 169: 1, 13
Sum of factors of 169 = 183
Sum of proper factors of 169 = 14
169 is a deficient number.
169 is a square number. $169 = 13 \times 13 = 13^2$
169 is the sum of the first 13 odd numbers.
169 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23 + 25

170 (one hundred seventy) | TOC

170 is a natural number.
170 is the successor of 169.
170 is the predecessor of 171.
170 is an even number.
170 is a composite number.
Prime factorization: 170 = 2 x 5 x 17
Factors of 170: 1, 2, 5, 10, 17, 34, 85, 170
Proper factors of 170: 1, 2, 5, 10, 17, 34, 85
Sum of factors of 170 = 324
Sum of proper factors of 170 = 154
170 is a deficient number.

171 (one hundred seventy one)

171 is a natural number.
171 is the successor of 170.
171 is the predecessor of 172.
171 is an odd number.
171 is a composite number.
Prime factorization: 171 = 3 x 3 x 19
Factors of 171: 1, 3, 9, 19, 57, 171
Proper factors of 171: 1, 3, 9, 19, 57
Sum of factors of 171 = 260
Sum of proper factors of 171 = 89
171 is a deficient number.
171 is a triangular number.
171 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18

171 is a palindromic number.

172 (one hundred seventy two)

172 is a natural number.
172 is the successor of 171.
172 is the predecessor of 173.
172 is an even number.
172 is a composite number.
Prime factorization: 172 = 2 x 2 x 43
Factors of 172: 1, 2, 4, 43, 86, 172
Proper factors of 172: 1, 2, 4, 43, 86
Sum of factors of 172 = 308
Sum of proper factors of 172 = 136
172 is a deficient number.

173 (one hundred seventy three)

173 is a natural number.
173 is the successor of 172.
173 is the predecessor of 174.
173 is an odd number.
173 is a prime number.
Factors of 173: 1, 173
Proper factor of 173: 1
Sum of factors of 173 = 174
Sum of proper factors of 173 = 1
173 is a deficient number.

174 (one hundred seventy four)

174 is a natural number.
174 is the successor of 173.
174 is the predecessor of 175.
174 is an even number.
174 is a composite number.
Prime factorization: 174 = 2 x 3 x 29
Factors of 174: 1, 2, 3, 6, 29, 58, 87, 174
Proper factors of 174: 1, 2, 3, 6, 29, 58, 87
Sum of factors of 174 = 360
Sum of proper factors of 174 = 186
174 is a deficient number.

175 (one hundred seventy five)

175 is a natural number.
175 is the successor of 174.
175 is the predecessor of 176.
175 is an odd number.

175 is a composite number.
Prime factorization: 175 = 5 x 5 x 7
Factors of 175: 1, 5, 7, 25, 35, 175
Proper factors of 175: 1, 5, 7, 25, 35
Sum of factors of 175 = 248
Sum of proper factors of 175 = 73
175 is a deficient number.

176 (one hundred seventy six)

176 is a natural number.
176 is the successor of 175.
176 is the predecessor of 177.
176 is an even number.
176 is a composite number.
Prime factorization: 176 = 2 x 2 x 2 x 2 x 11
Factors of 176: 1, 2, 4, 8, 11, 16, 22, 44, 88, 176
Proper factors of 176: 1, 2, 4, 8, 11, 16, 22, 44, 88
Sum of factors of 176 = 372
Sum of proper factors of 176 = 196
176 is an abundant number.

177 (one hundred seventy seven)

177 is a natural number.
177 is the successor of 176.
177 is the predecessor of 178.
177 is an odd number.
177 is a composite number.
Prime factorization: 177 = 3 x 59
Factors of 177: 1, 3, 59, 177
Proper factors of 177: 1, 3, 59
Sum of factors of 177 = 240
Sum of proper factors of 177 = 63
177 is a deficient number.

178 (one hundred seventy eight)

178 is a natural number.
178 is the successor of 177.
178 is the predecessor of 179.
178 is an even number.
178 is a composite number.
Prime factorization: 178 = 2 x 89
Factors of 178: 1, 2, 89, 178
Proper factors of 178: 1, 2, 89
Sum of factors of 178 = 270
Sum of proper factors of 178 = 92

178 is a deficient number.

179 (one hundred seventy nine)

179 is a natural number.
179 is the successor of 178.
179 is the predecessor of 180.
179 is an odd number.
179 is a prime number.
179 is an emirp. (971 is a prime number.)
Factors of 179: 1, 179
Proper factor of 179: 1
Sum of factors of 179 = 180
Sum of proper factors of 179 = 1
179 is a deficient number.

180 (one hundred eighty) | TOC

180 is a natural number.
180 is the successor of 179.
180 1s the predecessor of 181.
180 is an even number.
180 is a composite number.
Prime factorization: 180 = 2 x 2 x 3 x 3 x 5
Factors of 180: 1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 45, 60, 90, 180
180 is the least number that has exactly 18 factors.
Proper factors of 180: 1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 45, 60, 90
180 is the least number that has exactly 17 proper factors.
Sum of factors of 180 = 546
180 is the least number such that: sum of factors > 3 times the number.
Sum of proper factors of 180 = 366
180 is the least number such that: sum of proper factors > than 2 times the number.
180 is an abundant number.

181 (one hundred eighty one)

181 is a natural number.
181 is the successor of 180.
181 is the predecessor of 182.
181 is an odd number.
181 is a prime number.
181 is a palprime.
Factors of 181: 1, 181
Proper factor of 181: 1
Sum of factors of 181 = 182
Sum of proper factors of 181 = 1
181 is a deficient number.

182 (one hundred eighty two)

182 is a natural number.
182 is the successor of 181.
182 is the predecessor of 183.
182 is an even number.
182 is a composite number.
Prime factorization: 182 = 2 x 7 x 13
Factors of 182: 1, 2, 7, 13, 14, 26, 91, 182
Proper factors of 182: 1, 2, 7, 13, 14, 26, 91
Sum of factors of 182 = 336
Sum of proper factors of 182 = 154
182 is a deficient number.

183 (one hundred eighty three)

183 is a natural number.
183 is the successor of 182.
183 is the predecessor of 184.
183 is an odd number.
183 is a composite number.
Prime factorization: 183 = 3 x 61
Factors of 183: 1, 3, 61, 183
Proper factors of 183: 1, 3, 61
Sum of factors of 183 = 248
Sum of proper factors of 183 = 65
183 is a deficient number.

184 (one hundred eighty four)

184 is a natural number.
184 is the successor of 183.
184 is the predecessor of 185.
184 is an even number.
184 is a composite number.
Prime factorization: 184 = 2 x 2 x 2 x 23
Factors of 184: 1, 2, 4, 8, 23, 46, 92, 184
Proper factors of 184: 1, 2, 4, 8, 23, 46, 92
Sum of factors of 184 = 360
Sum of proper factors of 184 = 176
184 is a deficient number.

185 (one hundred eighty five)

185 is a natural number.
185 is the successor of 184.
185 is the predecessor of 186.
185 is an even number.
185 is a composite number.

Prime factorization: 185 = 5 x 37
Factors of 185: 1, 5, 37, 185
Proper factors of 185: 1, 5, 37
Sum of factors of 185 = 228
Sum of proper factors of 185 = 43
185 is a deficient number.

186 (one hundred eighty six)

186 is a natural number.
186 is the successor of 185.
186 is the predecessor of 187.
186 is an even number.
186 is a composite number.
Prime factorization: 186 = 2 x 3 x 31
Factors of 186: 1, 2, 3, 6, 31, 62, 93, 186
Proper factors of 186: 1, 2, 3, 6, 31, 62, 93
Sum of factors of 186 = 384
Sum of proper factors of 186 = 198
186 is an abundant number.

187 (one hundred eighty seven)

187 is a natural number.
187 is the successor of 186.
187 is the predecessor of 188.
187 is an odd number.
187 is a composite number.
Prime factorization: 187 = 11 x 17
Factors of 187: 1, 11, 17, 187
Proper factors of 187: 1, 11, 17
Sum of factors of 187 = 216
Sum of proper factors of 187 = 29
187 is a deficient number.

188 (one hundred eighty eight)

188 is a natural number.
188 is the successor of 187.
188 is the predecessor of 189.
188 is an even number.
188 is a composite number.
Prime factorization: 188 = 2 x 2 x 47
Factors of 188: 1, 2, 4, 47, 94, 188
Proper factors of 188: 1, 2, 4, 47, 94
Sum of factors of 188 = 336
Sum of proper factors of 188 = 148
188 is a deficient number.

189 (one hundred eighty nine)

189 is a natural number.
189 is the successor of 188.
189 is the predecessor of 190.
189 is an odd number.
189 is a composite number.
Prime factorization: 189 = 3 x 3 x 3 x 7
Factors of 189: 1, 3, 7, 9, 21, 27, 63, 189
Proper factors of 189: 1, 3, 7, 9, 21, 27, 63
Sum of factors of 189 = 320
Sum of proper factors of 189 = 131
189 is a deficient number.

190 (one hundred ninety) | TOC

190 is a natural number.
190 is the successor of 189.
190 is the predecessor of 191.
190 is an even number.
190 is a composite number.
Prime factorization: 190 = 2 x 5 x 19
Factors of 190: 1, 2, 5, 10, 19, 38, 95, 190
Proper factors of 190: 1, 2, 5, 10, 19, 38, 95
Sum of factors of 190 = 360
Sum of proper factors of 190 = 170
190 is a deficient number.
190 is a triangular number.
190 = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19

191 (one hundred ninety one)

191 is a natural number.
191 is the successor of 190.
191 is the predecessor of 192.
191 is an odd number.
191 is a prime number.
191 is a palprime.
Factors of 191: 1, 191
Proper factor of 191: 1
Sum of factors of 191 = 192
Sum of proper factors of 191 = 1
191 is a deficient number.

192 (one hundred ninety two)

192 is a natural number.
192 is the successor of 191.

192 is the predecessor of 193.
192 is an even number.
192 is a composite number.
Prime factorization: 192 = 2 x 2 x 2 x 2 x 2 x 2 x 3
Factors of 192: 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 64, 96, 192
192 is the least number that has exactly 14 factors.
Proper factors of 192: 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 64, 96
192 is the least number that has exactly 13 proper factors.
Sum of factors of 192 = 508
Sum of proper factors of 192 = 316
192 is an abundant number.

193 (one hundred ninety three)

193 is a natural number.
193 is the successor of 192.
193 is the predecessor of 194.
193 is an odd number.
193 is a prime number.
Factors of 193: 1, 193
Proper factor of 193: 1
Sum of factors of 193 = 194
Sum of proper factors of 193 = 1
193 is a deficient number.

194 (one hundred ninety four)

194 is a natural number.
194 is the successor of 193.
194 is the predecessor of 195.
194 is an even number.
194 is a composite number.
Prime factorization: 194 = 2 x 97
Factors of 194: 1, 2, 97, 194
Proper factors of 194: 1, 2, 97
Sum of factors of 194 = 294
Sum of proper factors of 194 = 100
194 is a deficient number.

195 (one hundred ninety five)

195 is a natural number.
195 is the successor of 194.
195 is the predecessor of 196.
195 is an odd number.
195 is a composite number.
Prime factorization: 195 = 3 x 5 x 13
Factors of 195: 1, 3, 5, 13, 15, 39, 65, 195

Proper factors of 195: 1, 3, 5, 13, 15, 39, 65
Sum of factors of 195 = 336
Sum of proper factors of 195 = 141
195 is a deficient number.

196 (one hundred ninety six)

196 is a natural number.
196 is the successor of 195.
196 is the predecessor of 197.
196 is an even number.
196 is a composite number.
Prime factorization: 196 = 2 x 2 x 7 x 7
Factors of 196: 1, 2, 4, 7, 14, 28, 49, 98, 196
Proper factors of 196: 1, 2, 4, 7, 14, 28, 49, 98
Sum of factors of 196 = 399
Sum of proper factors of 196 = 203
196 is an abundant number.
196 is a square number. $196 = 14 \times 14 = 14^2$
196 is the sum of the first 14 odd numbers.
$196 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23 + 25 + 27$

197 (one hundred ninety seven)

197 is a natural number.
197 is the successor of 196.
197 is the predecessor of 198.
197 is an even number.
197 is an odd number.
197 is a prime number.
Factors of 197: 1, 197
Proper factor of 197: 1
Sum of factors of 197 = 198
Sum of proper factors of 197 = 1
197 is a deficient number.
197 is the sum of the first 12 prime numbers.
$197 = 2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31 + 37$

198 (one hundred ninety eight)

198 is a natural number.
198 is the successor of 197.
198 is the predecessor of 199.
198 is an even number.
198 is a composite number.
Prime factorization: 198 = 2 x 3 x 3 x 11
Factors of 198: 1, 2, 3, 6, 9, 11, 18, 22, 33, 66, 99, 198
Proper factors of 198: 1, 2, 3, 6, 9, 11, 18, 22, 33, 66, 99

Sum of factors of 198 = 468
Sum of proper factors of 198 = 270
198 is an abundant number.

199 (one hundred ninety nine)

199 is a natural number.
199 is the successor of 198.
199 is the predecessor of 200.
199 is an odd number.
199 is a prime number.
199 is an emirp. (991 is a prime number.)
Factors of 199: 1, 199
Proper factor of 199: 1
Sum of factors of 199 = 200
Sum of proper factors of 199 = 1
199 is a deficient number.

Special Numbers 1 to 199 | TOC

For definitions of these special numbers,
go down yonder to the **Glossary**.

The one and only 1

Prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199

Palprimes: 2, 3, 5, 7, 11, 101, 131, 151, 181, 191

Emirps: 13, 17, 31, 37, 71, 73, 79, 97, 107, 113, 149, 157, 167, 179, 199

Square numbers: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196

Cubic numbers: 1, 8, 27, 64, 125

Powers of 2: 1, 2, 4, 8, 16, 32, 64, 128

Triangular numbers: 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190

Perfect numbers: 6, 28

Factorial numbers: 1, 2, 6, 24, 120

Fibonacci numbers: 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144

Palindromic numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 22, 33, 44, 55, 66, 77, 88, 99, 101, 111, 121, 131, 141, 151, 161, 171, 181, 191

Least number with exactly 1 factor:	1
Least number with exactly 2 factors:	2
Least number with exactly 3 factors:	4
Least number with exactly 4 factors:	6
Least number with exactly 5 factors:	16
Least number with exactly 6 factors:	12
Least number with exactly 7 factors;	64
Least number with exactly 8 factors:	24
Least number with exactly 9 factors:	36
Least number with exactly 10 factors:	48
Least number with exactly 12 factors:	60
Least number with exactly 14 factors:	192
Least number with exactly 16 factors:	120
Least number with exactly 18 factors:	180

TI-84 Program: Sum of Factors and Sum of Proper Factors | TOC

Calculating the sum of factors and sum of proper factors of a natural number is a tedious task, so we wrote a simple TI-84 Graphing Calculator to do this work. Here is our no-frills program.

TI-84 Program SUMFACT	**Comments**

`:Lbl 1`
`:ClrHome`
`:`
`:Input "N = ",N`
`:Disp ""`
`:`
`:0 → S`
`:`
`:For (K, 1, N)`
`:`
`:If N/K=int(N/K)`
`:S + K → S`
`:`
`:End`
`:`
`:Disp "SUM F: ",S`
`:Disp "SUM P: ",S-N`
`:Disp ""`
`:`
`:Input "AGAIN? 0=YES: ",A`
`:`
`:If A=0`
`:Goto 1`
`:Stop`
`:End`
	Labels the top of the program
	Clears the display
	
	Enter value of natural number
	Put a line space in the display
	
	Set the sum of factors to zero
	
	Begin For loop
	
	If N/K is an integer
	add K to the sum of factors
	
	End of For loop
	
	Display sum of factors
	Calculate & display sum of proper factors
	Put a line space in the display
	
	Enter 0 to go again
	
	If A= 0
	go to Lbl 1
	Else stop (A ≠ 0)
	End of program

Enter the program and run it. It begins by displaying **`N =`** and the cursor (■). Enter a natural number and press the **`Enter`** key.
 	
The program calculates and displays the sum of factors and sum of proper factors of N, and then asks if you want to do it again.
 	
To do again, enter 0 and press **Enter**. To quit enter any number other than 0 and press **Enter**.
 	
Over yonder is a run for N = 6 →
	`N = 6`
	
	`SUM F`
	`12`
	`SUM P`
	`6`
	
	`AGAIN? 0=YES:` ■

Glossary | TOC

abundant number 1: a natural number *n* for which the sum of the factors of *n* is greater than 2*n*. 2: a natural number *n* for which the sum of the proper factors of *n* is greater than *n*.

composite number 1: a natural number greater than 1 that has factors other than 1 and the number itself. **2**: a natural number that has three or more *different* factors.

cubic number a number that can be written as the cube of a natural number. Cubic numbers are 1, 8, 27, 64, and so on. $1 = 1^3$, $8 = 2^3 = 8$, $3^3 = 27$, $64 = 4^3$, and so on.

deficient number 1: a natural number *n* for which the sum of the factors of *n* is less than 2*n*. **2:** a natural number *n* for which the sum of the proper factors of *n* is less than *n*.

emirp 1: a prime number that is the reverse of a different prime number. 2: a prime number obtained by writing the digits of a different prime number in reverse order (right to left instead of left to right). Examples: 13 and 31, 37 and 73.

factorial number If *n* is a natural number, then *n factorial*, written *n*!, is the product of the natural numbers from 1 to *n*. 1! = 1, 2! = 1 x 2 = 2, 3! = 1 x 2 x 3 = 6, 4! = 1 x 2 x 3 x 4 = 24.

factor If you multiply two or more natural numbers, the product is a natural number. The numbers you multiplied to obtain the product are factors of the product. Example: 2 x 3 = 6, so 2 and 3 are factors of 6. Example: 2 x 3 x 5 = 30, so 2, 3, and 5 are factors of 30. If *a* x *b* = *c*, then *a* and *b* are factors of *c*.

Fibonacci number the numbers 1, 1, 2, 3, 5, 8, 13, and so on. After the second number (1), each number is the sum of the preceding two numbers.

natural number the numbers 1, 2, 3, 4, 5, and so on forever. They keep going and going and going, never ending. Natural numbers are also called counting numbers and positive integers.

palprime a prime number that when reversed (read right to left instead of left to right) is the same prime number. Examples: 11, 101, 131, 151, 181, and 191.

perfect number 1: a natural number *n* for which the sum of the factors of *n* is equal to 2*n*. 2: a natural number *n* for which the sum of the proper factors of *n* is equal to *n*.

predecessor Every natural number *except 1* has a predecessor that is one less than the natural number. If *n* is a natural number, then its predecessor is *n* – 1. Examples: 1 is the predecessor of 2, 2 is the predecessor of 3, 3 is the predecessor of 4, … , 98 is the predecessor of 99.

prime number 1: a natural number that has exactly two different factors. 2: a natural number greater than 1 whose only factors are 1 and the number itself.

proper factor a factor of a natural number other than the number itself. A proper factor of a number is a factor that is less than the number.

square number a number that can be written as the square of a natural number. Square numbers are 1, 4, 9, 16, 25, and so on. In this unit, we use a caret (^) followed by 2 to indicate the square of a number. 1 = 1^2, 4 = 2^2, 9 = 3^2, 16 = 4^2, and so on.

successor Every natural number has a successor that is one more than the natural number. If *n* is a natural number, then its successor is *n* + 1. Examples: 2 is the successor of 1, 3 is the successor of 2, 4 is the successor of 3, …, 99 is the successor of 98.

triangular number the numbers 1, 3, 6, 10, 15, and so on. Triangular numbers can be represented by triangles having 1 dot, 3 dots, 6 dots, 10 dots, 15 dots, and so on. The first triangular number is 1. A triangular number greater than 1 is the sum of consecutive natural numbers beginning with 1. Examples: 3 =1 + 2, 6 = 1 + 2 + 3, 10 = 1 + 2 + 3 + 4.

Zocchihedron: a 100-faced die with faces numbered 0 to 99 that resembles a golf ball. It was designed by Lou Zocchi for use in role-playing games such as *Dungeons & Dragons*. Use it to roll percentages from 0% to 99%. Or use 0 to mean 100% and roll percentages from 1% to 100%. See Zocchihedron at http://en.wikipedia.org/wiki/Zocchihedron.

Zocchihedron

END