

Sol[n] writes n as a sum of numbers whose only prime factors are 2 and 3 and which are not divisible by each other.

```
Clear[Sol];
Sol[0] = {};
Sol[n_] /; EvenQ[n] := Sol[n] = 2 Sol[n/2];
Sol[n_] /; OddQ[n] := Sol[n] = Module[{p},
  p = 3^Floor[Log[3, n]];
  Prepend[Sol[n - p], p]
]

Sol[513]

{243, 162, 108}

Max[Length /@ (Sol /@ Range[10 000])]

8

Position[Length /@ (Sol /@ Range[10 000]), 8]

{{6305}, {6433}}

Sol[6305]

{2187, 1458, 972, 648, 432, 288, 192, 128}

IntegerDigits[6433, 6]

{4, 5, 4, 4, 1}
```