******************** **Mathematical Weekly** *********************
(week five)

How Special is the Number 2187 ?

Permutation 1. Sums on the right are permutations of numbers on the left:

            2187 + 1234   = 3421
            2187 + 12345   = 14532
            2187 + 123456   = 125643
            2187 + 1234567   = 1236754
            2187 + 12345678   = 12347865
            2187 + 123456789   = 123458976

Permutation 2. The right sides are in another pattern of the numbers on the left:

            2178 + 1234   = 3412
            2178 + 2345   = 4523
            2178 + 3456   = 5634
            2178 + 4567   = 6745
            2178 + 5678   = 7856
            2178 + 6789   = 8967

Reversal.   9999 - 2187   = 7812   (the right is reversal of the left)
            9999 - 7812   = 2187
            2187 / 9999   = 0.2187218721872187...

Power.   2187 = 3^7
            1728 = (12)^3

In base 3.   2187 = 10,000,000

Elsewhere have you seen 2187 ? -- Perhaps e = 2.718... ?

☺ **GRC**
EE, CityU
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