1.7 Explicit Sequences

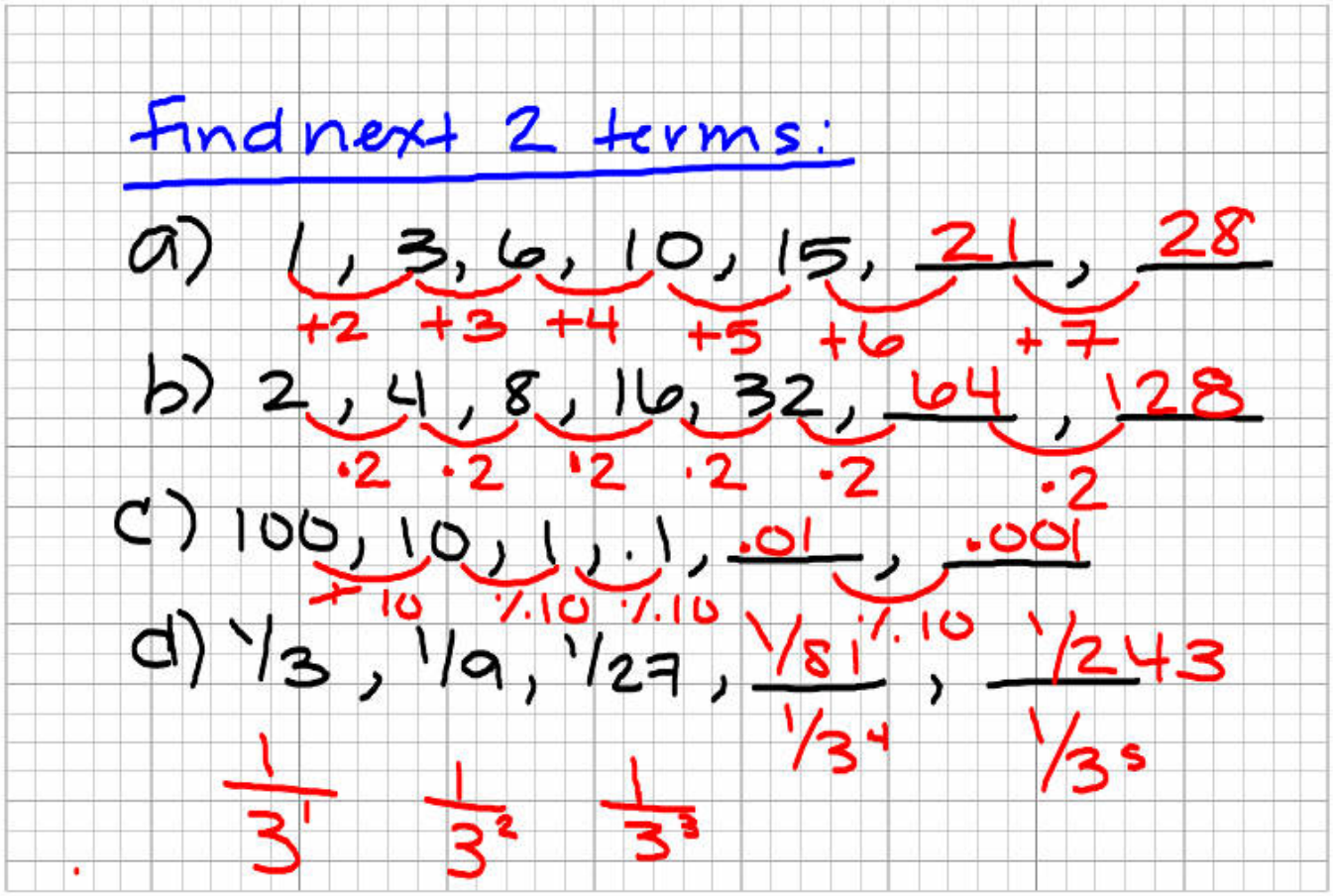
an ordered list of terms;
a function whose domain (input) is all natural #s.

$\{1, 2, 3, \ldots\}$

term: each item in sequence

t sub 1

$\underset{1}{t_1}$ $\underset{2}{t_2}$ $\underset{3}{t_3}$ $\underset{4}{t_4}$, . . . $\underset{n}{t_n}$


Find next 2 terms:
a) 1, 3, 6, 10, 15, 21, 28
+2 +3 +4 +5 +6 +7
b) 2, 4, 8, 16, 32, 64, 128
·2 ·2 ·2 ·2 ·2 ·2
c) 100, 10, 1, .1, .01, .001
÷10 ÷10 ÷10 ÷10
d) 1/3, 1/9, 1/27, 1/81, 1/243
1/3^1 1/3^2 1/3^3 1/3^4 1/3^5

2 key pieces of info:

1) one equation → terms are denoted by subscript

2) can plug in & find any term #.

Ex $t_n = 3n + 2$

t sub n

$t_1 = 3(1) + 2 = 5$

$t_2 = 3(2) + 2 = 8$

$t_{10} = 3(10) + 2 = 32$

$t_{14} = 3(14) + 2 = 44$