Assignment-1

EE:1205 (Signals and Systems)
Indian Institute of Technology, Hyderabad

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Question 10.5.3.12:

Find the sum of the first 40 positive integers divisible by 6.

Solution:

Parameter	Value
Difference between 100^{th} terms	100

TABLE 0
PARAMETER TABLE

The first 40 positive integers that are divisible by 6 are 6,12,18,24...
x(0)=6 and d=6

$$x(n) = x(0) + nd \tag{1}$$

$$x(40) = x(0) + 40d = 0 + 40 * 6 = 240 \tag{2}$$

$$S_{40} = \frac{40}{2}[x(1) + x(40)] = 20[6 + 240] = 4920 \tag{3}$$