

Skill Set 16 – 1, 3, 6, 10 and 15 sequence pattern (Patterns)

Sequence number	Value
1	1
2	3
3	6
4	10
5	15
6	
7	

(i): Find the value for Sequence number 6 and 7

(ii): Find the Sequence number that corresponds to a value of 820.

(i): Value of Sequence number 2 – value of Sequence number 1 = 2, value of Sequence number 3 – value of Sequence number 2 = 3, value of Sequence number 4 – value of Sequence number 3 = 4, value of Sequence number 5 – value of Sequence number 4 = 5,

Value of Sequence number 6 = 15 + 6 = **21**

Value of Sequence number 7 = 21 + 7 = **28**

(ii): The sequence 1, 3, 6, 10 and 15 is a special sequence and the general pattern is as follows,

$$\frac{(\text{Sequence number})(\text{Sequence number} + 1)}{2}$$

By guess and check,

$$\frac{(20) \times (21)}{2} = 210$$

$$\frac{(30) \times (31)}{2} = 465$$

$$\frac{(40) \times (41)}{2} = 820$$

820 corresponds to Sequence number **40**.