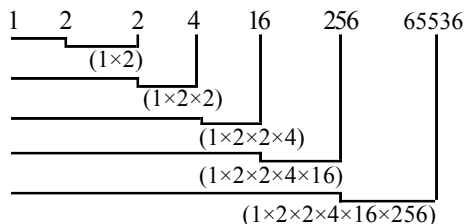# NUMBER SERIES

Directions : *In the following questions, select the number(s) from the given options for completing the given series.*

1. 7776, 1296, 216, 36, 6, ?
  (*a*) 6   (*b*) 0
  (*c*) 3   (*d*) 1

2. 29282, 2662, 242, 22, ?
  (*a*) 1   (*b*) 2
  (*c*) 0   (*d*) 11

3. 1, 2, 2, 4, 16, ?, 65536
  (*a*) 276   (*b*) 64
  (*c*) 256   (*d*) 198

4. 3, 5, 9, 15, 23, ?, 45
  (*a*) 37   (*b*) 35
  (*c*) 31   (*d*) 33

5. 7, 21, 35, 49, 63, ?
  (*a*) 70   (*b*) 77
  (*c*) 81   (*d*) 108

6. 10, 14, 23, 39, 64, ?, 149
  (*a*) 78   (*b*) 128
  (*c*) 103   (*d*) 100

7. 6, 24, 29, 116, 121, ?, 489
  (*a*) 468   (*b*) 484
  (*c*) 243   (*d*) 363

8. 5, 50, 45, 450, 445, ?, 4445
  (*a*) 4450   (*b*) 4600
  (*c*) 4550   (*d*) 4500

9. 6.25, 9, 12.25, 16, 20.25, 25, 30.25?
  (*a*) 36   (*b*) 32
  (*c*) 28.25   (*d*) 40.25

10. 243, 5, 81, 15, 27, 45, 9, ?
  (*a*) 5   (*b*) 15
  (*c*) 135   (*d*) 27

11. 2, 7, 14, 23, ?, 47
  (*a*) 31   (*b*) 38
  (*c*) 28   (*d*) 34

12. 0, 1, 8, 27, 64, ?
  (*a*) 125   (*b*) 128
  (*c*) 256   (*d*) 121

13. 37, 47, 58, ?, 79, 95
  (*a*) 71   (*b*) 69
  (*c*) 68   (*d*) 67

14. 4, –8, 14, –22, 32, ?
  (*a*) –44   (*b*) 42
  (*c*) –42   (*d*) 44

15. 6, 7, 9, 11, 15, 15, 24, 19, ?
  (*a*) 32   (*b*) 34
 (*c*) 36   (*d*) 37

EXPLANATORY ANSWERS

1. (d) : The numbers in this sequence are divided by 6 each time.

2. (b) : The numbers in the series are divided by 11 at each step.

**3. (c) :** The number in the series is product of all the numbers preceding it.

1   2   2   4   16   256   65536
(1×2)
$(1\times2\times2)$
$(1\times2\times2\times4)$
$(1\times2\times2\times4\times16)$
$(1\times2\times2\times4\times16\times256)$

4. (d) : The difference between consecutive numbers increases by 2 at each step.

$$3 \quad 5 \quad 9 \quad 15 \quad 23 \quad 33 \quad 45$$
$$+2 \quad +4 \quad +6 \quad +8 \quad +10 \quad +12$$
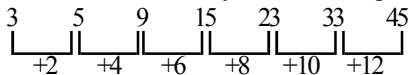
5. (b) : The series is multiplication of 7 by odd numbers starting from 3.

$$7 \quad 21 \quad 35 \quad 49 \quad 63 \quad 77$$
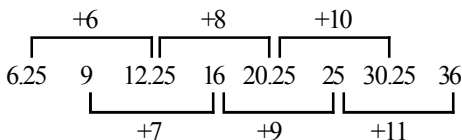$$\times 3$$
$$\times 5$$
$$\times 7$$
$$\times 9$$
$$\times 11$$
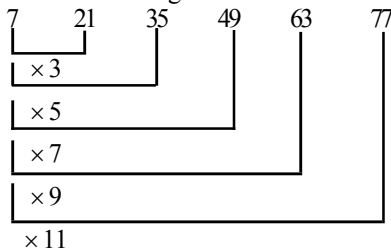
6. (d) : The number plus the square of numbers in natural order starting from 2 gives the next number in the series.

$$10 \quad 14 \quad 23 \quad 39 \quad 64 \quad 100 \quad 149$$
$$+2^2 \quad +3^2 \quad +4^2 \quad +5^2 \quad +6^2 \quad +7^2$$
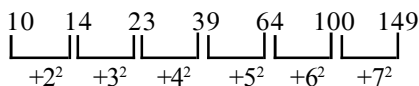
7. (b) : The sequence in the series is ×4, +5, which is repeated.

8. (a) : The sequence in the series is ×10, –5, which is repeated.

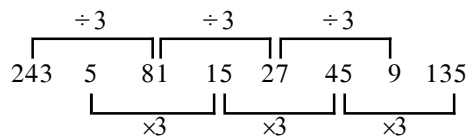**9. (a) :** There are two alternate series :

$$+6 \qquad +8 \qquad +10$$
$$6.25 \quad 9 \quad 12.25 \quad 16 \quad 20.25 \quad 25 \quad 30.25 \quad 36$$
$$+7 \qquad +9 \qquad +11$$

Series I : 6.25, 12.25, 20.25, 30.25 (sequence is +6, +8, +10)
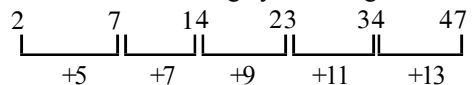*Series II* : 9, 16, 25, 36 (sequence is +7, +9, +11)

10. (c) : There are two alternate series :

$$\div 3 \qquad \div 3 \qquad \div 3$$
$$243 \quad 5 \quad 81 \quad 15 \quad 27 \quad 45 \quad 9 \quad 135$$
$$\times 3 \qquad \times 3 \qquad \times 3$$

Series I : 243, 81, 27, 9 (division by 3)
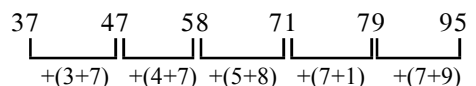*Series II* : 5, 15, 45, 135 (multiplication by 3)

11. (d) : The difference between two consecutive numbers is increasing by 2 starting from 5.

$$2 \quad 7 \quad 14 \quad 23 \quad 34 \quad 47$$
$$+5 \quad +7 \quad +9 \quad +11 \quad +13$$

12. (a) : The numbers are cubes of numbers in natural order.

13. (a) : The sum of the digits of the number is added to the number to obtain the next number in the series.

$$37 \quad 47 \quad 58 \quad 71 \quad 79 \quad 95$$
$$+(3+7) \quad +(4+7) \quad +(5+8) \quad +(7+1) \quad +(7+9)$$

14. (a) : Alternate numbers are marked positive and negative, but the difference between their magnitude increases by 2 at each step.

$$4 \quad -8 \quad 14 \quad -22 \quad 32 \quad -44$$
$$4 \quad 6 \quad 8 \quad 10 \quad 12$$

15. (c) : There are two alternate series :
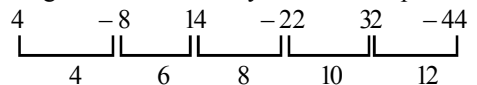
$$+3 \qquad +6 \qquad +9 \qquad +12$$
$$6 \quad 7 \quad 9 \quad 11 \quad 15 \quad 15 \quad 24 \quad 19 \quad 36$$
$$+4 \qquad +4 \qquad +4$$
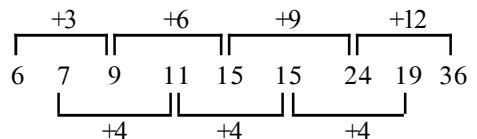
Series I : 6, 9, 15, 24, 36 (sequence is +3, +6, +9, +12)
Series II : 7, 11, 15, 19 (addition of 4 at each step)