

### Series Completion

A series is a uniform set of one or more digits, letters, figures, etc. in which terms follow a certain rule.

To complete a series or identify a term, student is required to identify the rule on which the given series has been formed.

Let us illustrate readers with the help of examples and their explained answers.

### EXAMPLE

1. Choose the missing term to complete the given series.

3, 5, 10, 12, 24, 26, 52, ?

(a) 104

(b) 102

(c) 54

(d) 50

**Explanation (c):** We observe that

$$2^{\text{nd}} \text{ term} = 3 + 2 = 5$$

$$3^{\text{rd}} \text{ term} = 5 \times 2 = 10$$

$$4^{\text{th}} \text{ term} = 10 + 2 = 12$$

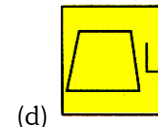
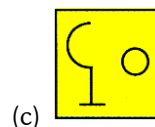
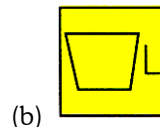
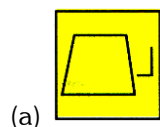
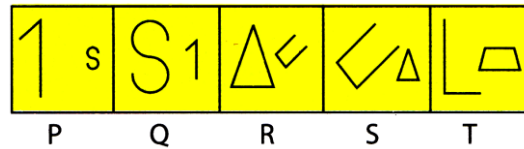
$$5^{\text{th}} \text{ term} = 12 \times 2 = 24$$

Clearly the pattern is:  $+ 2, \times 2, + 2, \times 2, + 2, \times 2, + 2$

$$\text{So, } 8^{\text{th}} \text{ (required) term} = 52 + 2 = 54$$

Hence the correct option is (c).

2. Five consecutive figures P, Q, R, S and T given below form a series by using a definite rule. Select a figure from the options to continue the series.



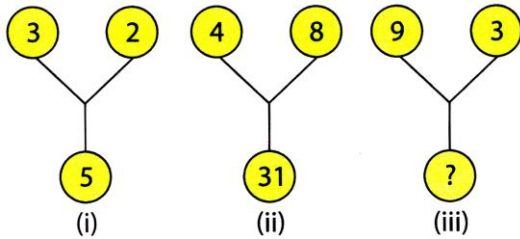
**Explanation (d):**

In P and Q, the two elements interchange positions and the smaller element gets enlarged while the larger element gets reduced in size. In the next step, the smaller element is replaced by a new small element and the larger element is replaced by a new large element. These two steps occur alternately.

### Inserting the missing character

A pattern is a set of number or a set of figures in which a number/letter is missing. To identify the missing number/letter a student is required to decipher the pattern. The following example would be helpful for pattern based problems.

3. Which number will replace the question mark (?)



(a) 21

(b) 23

(c) 26

(d) 27

#### Explanation (c):

From figure (i):  $(3 \times 2) - 1 = 5$ ,

From figure (ii):  $(4 \times 8) - 1 = 31$ ,

From figure (iii):  $(9 \times 3) - 1 = 26$ .

Hence the number 26 will replace the question mark.