

**SOF INTERNATIONAL  
MATHEMATICS OLYMPIAD**

Total Questions : 35

Time : 1 hr.

<b>PATTERN &amp; MARKING SCHEME</b>				
<b>Section</b>	<b>(1) Logical Reasoning</b>	<b>(2) Mathematical Reasoning</b>	<b>(3) Everyday Mathematics</b>	<b>(4) Achievers Section</b>
<b>No. of Questions</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>5</b>
<b>Marks per Ques.</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>



*Scan the QR code  
for more details*

## **SYLLABUS**

**Section – 1** : Patterns, Alphabet Test, Coding-Decoding, Ranking Test, Mirror Images, Geometrical Shapes and Solids, Embedded Figures, Direction Sense Test, Possible Combinations, Analogy and Classification, Clock and Calendar.

**Section – 2** : Numerals, Number Names, Number Sense (more than 4-digit numbers), Computation Operations, Fractions, Length, Weight, Capacity, Time, Money, Geometry, Perimeter of Various Shapes, Symmetry, Conversions, Data Handling

**Section – 3** : Syllabus as per Section–2.

**Section – 4** : Higher Order Thinking Questions - Syllabus as per Section–2.

6348, 1479 and 1599  
↓  
Smallest

Ascending order

$$1479 < 1599 < 6348$$

Descending order (High to low)

$$\begin{array}{r} 6348 \\ 1479 \\ + 1599 \\ \hline 9426 \end{array}$$

Line  
Ray

~~Fig.~~  
Line segment  
Point

$$\begin{array}{r} 21 \\ \times 12 \\ \hline 252 \end{array}$$

School  
exam

$$\begin{array}{r} 21 \\ \times 12 \\ \hline 42 \\ 210 \\ \hline 252 \end{array}$$

$$\begin{array}{r} 21 \\ \times 12 \\ \hline 252 \end{array}$$

(4+1)

$$\begin{array}{r} 25 \\ \times 12 \\ \hline 200 \\ 500 \\ \hline 300 \end{array}$$

10

$$\begin{array}{r} 13 \\ \times 13 \\ \hline 169 \end{array}$$

$$\begin{array}{r} 22 \\ \times 13 \\ \hline 286 \end{array}$$

$$\begin{array}{r} 31 \\ \times 12 \\ \hline 3(5)2 \\ \hline \boxed{372} \end{array}$$

$$\begin{array}{r} 32 \\ \times 12 \\ \hline 384 \end{array} \checkmark$$

$$\begin{array}{r} 26 \\ \times 11 \\ \hline 286 \end{array}$$

$$\begin{array}{r} 49 \\ \times 10 \\ \hline 490 \\ \hline \hline \hline \end{array}$$

$$\begin{array}{r} 39 \\ \times 24 \\ \hline 78 \\ 780 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 18 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 24 \\ \hline 168 \\ 840 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ 4 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 13 \\ \times 14 \\ \hline 182 \end{array} \checkmark$$

$$\begin{array}{r} 89 \\ \times 42 \\ \hline \end{array}$$

$$\begin{array}{r}
 13 \\
 \times 21 \\
 \hline
 \textcircled{273} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 16 \\
 \times 24 \\
 \hline
 204 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3164 \\
 + 12 \\
 \hline
 16
 \end{array}$$



$$\begin{array}{r}
 16 \\
 \downarrow \times \downarrow \\
 24 \\
 \hline
 \boxed{384} \\
 \hline
 \end{array}$$

24

$$\begin{array}{r}
 12 \\
 4 \\
 \hline
 16
 \end{array}$$

$$\begin{array}{r} 19 \\ \times 12 \\ \hline 308 \end{array}$$

$$\begin{array}{r} 19 \\ \times 12 \\ \hline 228 \end{array}$$

Diagram illustrating the multiplication of 19 by 12. The numbers are written as 19 and 12. A vertical double-headed arrow is drawn between the two 1s. A diagonal arrow points from the top 1 to the bottom 2. A diagonal arrow points from the top 9 to the bottom 2. The result 228 is written below the horizontal line, with a small 1 under the first 2 and a small 1 under the 8.

$$\begin{array}{r} 32 \\ \times 13 \\ \hline 416 \end{array}$$

$$\begin{array}{r} 36 \\ \times 12 \\ \hline 432 \end{array}$$

$$\begin{array}{r} 24 \\ \times 22 \\ \hline 528 \end{array}$$

$$\begin{array}{r} 42 \\ \times 13 \\ \hline 546 \end{array}$$

$$\begin{array}{r} 35 \\ \times 35 \\ \hline 1225 \end{array}$$

$$\begin{array}{r} 35 \\ \times 35 \\ \hline 1225 \end{array}$$

$$\begin{array}{r} 05 \\ \times 05 \\ \hline 225 \end{array}$$

$$\begin{array}{r} 45 \\ \times 45 \\ \hline 2025 \end{array}$$

$$\begin{array}{r} 95 \\ \times 95 \\ \hline 9025 \end{array}$$

$$\begin{array}{r} 119 \\ \times 119 \\ \hline 224 \end{array}$$

$$\begin{array}{r} 85 \\ 85 \\ \hline 7225 \end{array}$$

$$\begin{array}{r} 05 \\ 65 \\ \hline 4225 \end{array}$$

$$\begin{array}{r} 56 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 85 \\ \times 85 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ \times 34 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 65 \\ \times 65 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \times 25 \\ \hline 25 \\ \hline 625 \end{array}$$

$$\begin{array}{r} 5 \times 45 \\ \hline 45 \\ \hline 2025 \end{array}$$

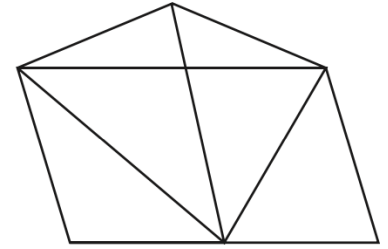
$$\begin{array}{r} 6 \times 55 \\ \hline 55 \\ \hline 3025 \end{array}$$

$$\begin{array}{r} 4 \times 35 \\ \hline 35 \\ \hline 1225 \end{array}$$

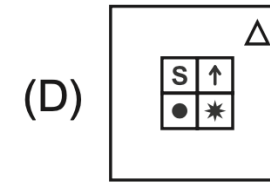
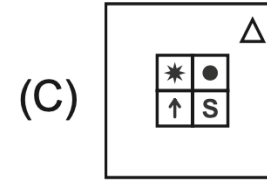
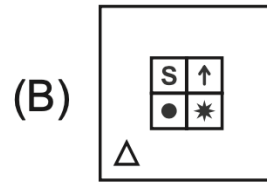
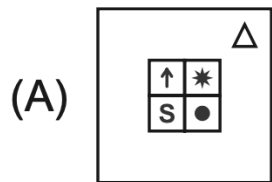
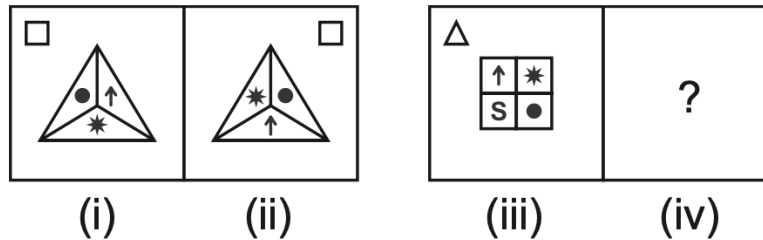
# LOGICAL REASONING

1. How many triangles are there in the given figure?

- (A) 11
- (B) 12
- (C) 10
- (D) 14



2. There is a certain relationship between figures (i) and (ii). Establish a similar relationship between figures (iii) and (iv) by selecting a suitable figure from the options which will replace the (?) in Fig. (iv).



3. Some letters are given which are numbered 1, 2, 3, 4, 5 and 6 followed by four options containing combinations of these numbers. Find the combination of numbers so that the letters are arranged accordingly to form a meaningful English word.

N   O   L   E   D   G  
1   2   3   4   5   6

(A) 6, 2, 3, 5, 4, 1

(B) 5, 4, 1, 6, 2, 3

(C) 3, 4, 1, 6, 5, 2

(D) 1, 6, 5, 4, 3, 2

