

CLASSIFICATION

Contents

2.3 CLASSIFICATION

Classification means to assort the items of a given group on the basis of certain common qualities (characteristics) they possess and then spot the stranger (odd man) out. We are required to select the figure which differs from all other figures in the given set.

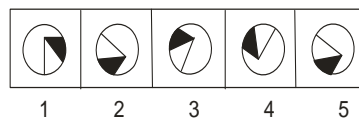
Bases of Classification

The figures may broadly be classified on the following bases:

1. SFR (Same figure rotates)

The four similar figures are actually the rotated forms of the same figure. For example, in the figures below, it is only the rotation of the same figure in four figures while one of them is a different figure.

Example:

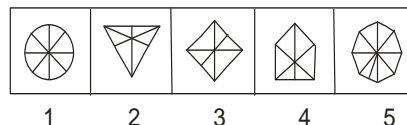


Solution: 3

2. Number of lines or components

The figures may be classified on the basis of the number of lines or the number of components. For example, all figures (except the odd man out) may be made of the same number of components; they all may be made of only even number of (or odd number of) lines or the sum (or difference) of the number of lines may be a fixed number etc.

Example:

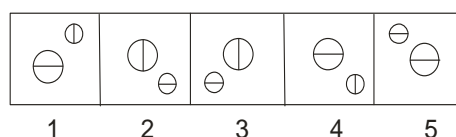


Solution: 5; all others are divided in six segments.

3. Origin of Lines

Apart from the number of lines, the origin of lines is also an important consideration for some of the figures. Some figures are made of several components, an important component of which could be a line. The point from where it starts is an important factor to consider and it may be the basis on which a figure may be differentiated from the remaining four.

Example:

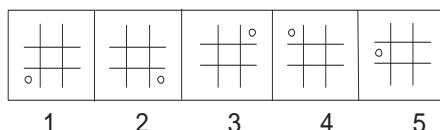


Solution: 5; all figures are made of two circles of different sizes, each circle having a line within it. One of these lines is vertical and the other horizontal. But in (5), both the lines are horizontal.

4. Comparative positions of the elements

A figure consists of several components. Now it may be that in the figures all the components may have a definite position in relation to each other and this could be the basis on which any four figures could be said to be similar and the fifth could be said to be different.

Example:

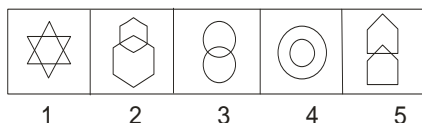


Solution: 5; the small circle in all other figures is in the corner whereas in (5) it is not at the corner.

5. Comparative sizes of the elements

In some figures the size of elements may be fixed with respect to other figures and if it is changed it might produce an odd figure. Thus we may classify the figures on the basis of comparative sizes of the elements.

Example:

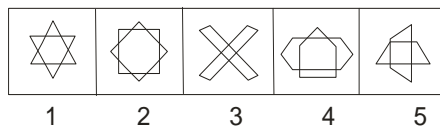


Solution: 4; in all others there are two similar figures welded together whereas in figure 4 a smaller figure is inside the larger one.

6. Comparative shapes of the elements

The elements in a given group of figures may have a definite shape, a definite appearance and this shape or appearance may be the basis of classifying of some figures into a group and picking out the odd figure.

Example:

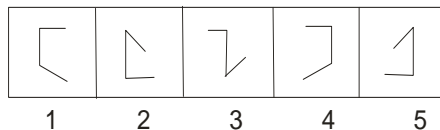


Solution: 4; in each figure there are two identical shapes in rotated form.

7. Other considerations

i. Interior-exterior consideration:

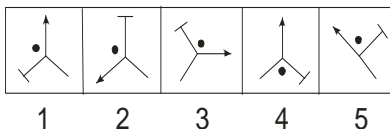
When a figure is made of more than one elements/components, it is naturally likely that some of the elements may lie within (interior) some other elements while some others may lie outside (exterior) the other elements.

Example:

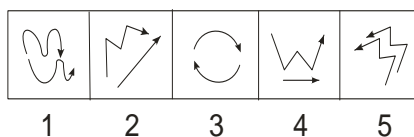
Solution: 3; If you join the two open ends of a figure you get an enclosed figure. In (3) if you do so you get two enclosed figures.

ii. Angle consideration:

The angle between any two of the lines or between a line and an element or between any two of the elements may be typical and thus the angle consideration may become the basis of classification of figures.

Example:

Solution: 4; Three line segments are meeting in all the figures in such a way that they make two obtuse angles (an obtuse angle is one which is greater than 90° but less than 180°) and one right angle (a right angle is one which is equal to 90°). An additional component is also there. Now, the additional component is placed in such a way that it lies interior to one of the obtuse angles in all the figures except in fig. 4 where the additional component (the dot) is placed in such a way that it is interior to the right angle and not the obtuse angle.

iii. Parallelism/Non-Parallelism:**Example:**

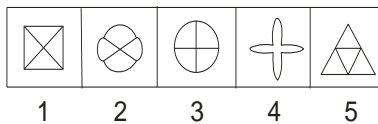
Solution: 5; All other figures exhibit non-parallelism except figure 5.

SYNTHESIS OF FIGURES

In a given group of figures, each figure consists of several components and these components, their number, their positioning; their shape and size etc are formed according to a definite rule. If we are able to spot the logic that is the basis of the synthesis of figures we may be able to detect the figure.

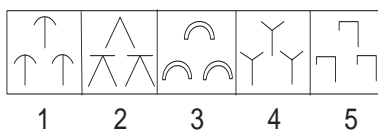
It may be noted that we have already seen cases where the figures were created and classified on the basis of comparative shapes, sizes and positions of components or on the basis of number or origin of lines etc. Even after these considerations have been made, it does not remain very easy to detect the logic or the algorithm behind the making of the figures. However, with a little bit of foresight and experience, such problems can easily be tackled as the following examples suggest.

Example:



Solution: 4; this is the only figure which has not been divided into four equal parts.

Example:



Solution: 2; all the three components are not identical in this figure.