

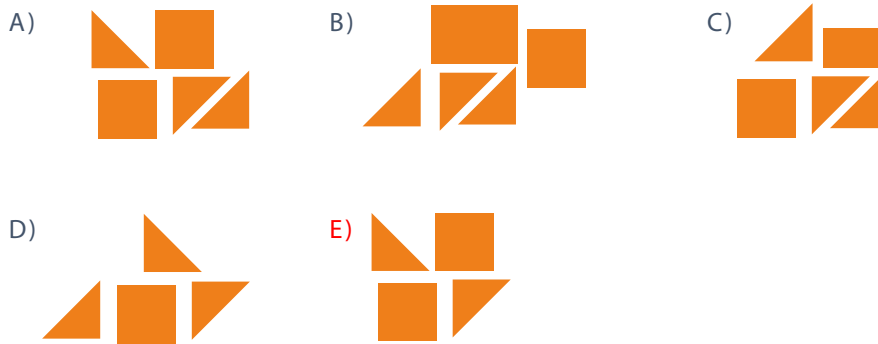
## Specific Tips for VNVS (Verbal Numerical and Visual Spatial) Test

### TIPS FOR VISUAL-SPATIAL REASONING

**TIP1.** Some questions test your shape combining ability. In solving such questions we need to make drawings in the already giving shape in order to see the relation of the figure and its parts. In such cases we can seek for a unite shape where the whole shape can be composed of this unit shape

#### Example:

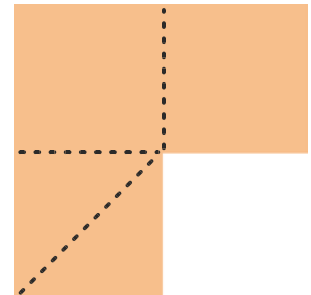
1) Below, there are some plane figures. Which of the options, makes up the next shape when the figures are arranged without overlapping each other?



#### Solution:

Let us eliminate the options one by one.

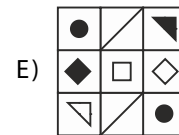
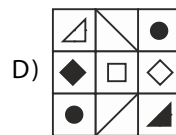
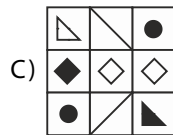
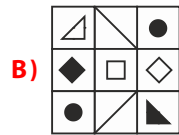
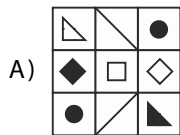
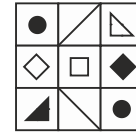
- 1) "A" cannot be the answer, because it seems that there are more shapes in this option. As seen in the next figure, right triangle can be considered as the unit shape. Then we need 6 of this unit shape to form the whole figure.
- 2) "B" cannot be the answer. Because it contains nearly 9 of the unit shape.
- 3) "C" cannot be the answer. Because it contains 5 of the unit shape and another rectangle which does not include the unit shape.
- 4) "D" cannot be the answer. Because it contains 5 of the unit shape. Do not forget that we need 6.
- 5) "E" is the answer. Because it contains 6 of the unit shape.



**TIP2.** If the mirror image of a shape is asked first we have to decide on the mirror line. It can be either in vertical or horizontal. Afterwards you can focus on at least two remarkable points of the shape and try to observe the symmetry accordingly.

**Example:**

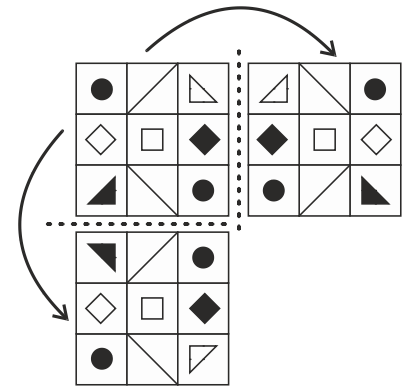
2) Which one of the following is a mirror image of the next figure?



**Solution:**

In the next picture, mirrors of the figure were constructed both in vertical and horizontal lines.

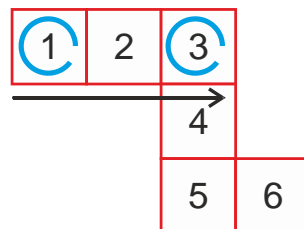
As you see, if you focus only on the circle on the left it is hard to decide which mirror line was used. If you focus on the black circle on the upper left corner and the black triangle on the bottom left corner you can easily see that vertical mirror line was used. Then the answer is “**B**”. Although “A” is so similar to “B” the direction of the white triangle on the upper left is wrong in “A”.



**TIP3.** In order to find if a net forms a cube when folded or not we can number all the faces and try to find the opposite of each face. For more, follow the steps in the following as shown in the examples below.

**STEP 1.**

Let us find twin faces in horizontal direction where there is one face in the two.

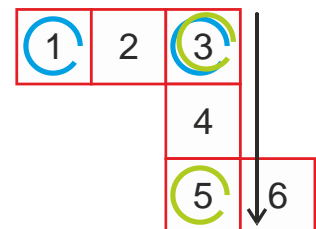


**STEP 2.**

Let us find twin faces in vertical direction.

As you see, face 1 and face 5 seem to be the opposites of face 3.

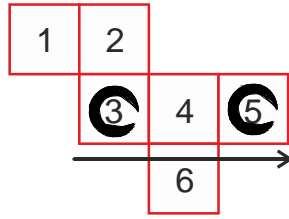
This is impossible, so it is not possible to form a cube when this net is folded.



## Example 2:

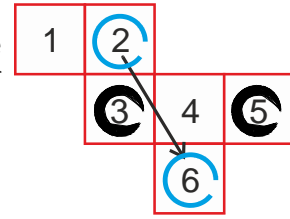
### STEP 1.

Faces next to each other can never be opposite to each other when folded. So, first try to find twin faces in horizontal direction where there is one face in the two.



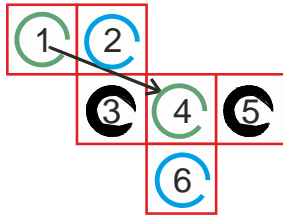
### STEP 2.

Since there is no faces which can be the opposite of each other vertically. We check for faces in diagonal directions.



### STEP 3.

Finally faces 1 and 4 are opposite to each other.

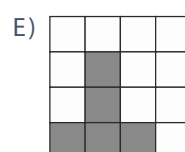
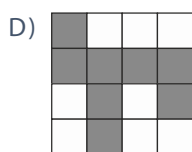
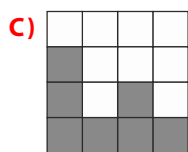
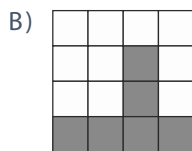
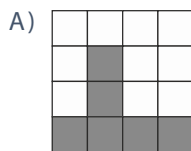
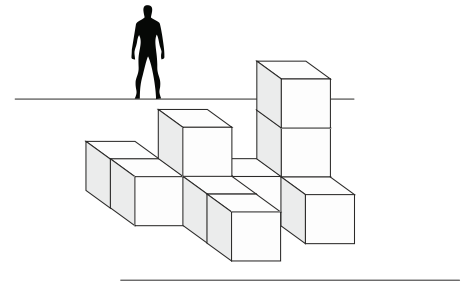


**SINCE EACH FACE HAS AN OPPOSITE, THIS NET CAN FORM A CUBE WHEN FOLDED.**

**TIP4.** In order to find different perspectives of a solid figure we'd better draw some faces as shown below.

### Example:

- 3) **Eleven equal cubes were located as seen in the next picture. How does a man see this construction if he stands just behind it?**



### Solution:

Think that the man stand in front of the blocks. Then you'd better paint the faces that are just in front of you. Afterwards, since the man stands BEHIND instead of FRONT take the symmetry of the painted faces. You'll see that the answer is "C". You can use the painting technique for watching in other directions.

