

GATE



ALL BRANCHES

GENERAL APTITUDE

Spatial Aptitude



Lecture No: 01

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TOPICS TO BE COVERED



1.

Classification and Grouping



2.

Mirror & Water Image



3.

Questionnaire



Q.

In a class of 160 students, it was found that 65 play Cricket 70 play Hockey and 90 play Football, 30 play Cricket and Hockey, 40 Cricket and Football, 35 play Hockey and Football and 15 play none of these three games.

Assignment

➤ How many play all three games?

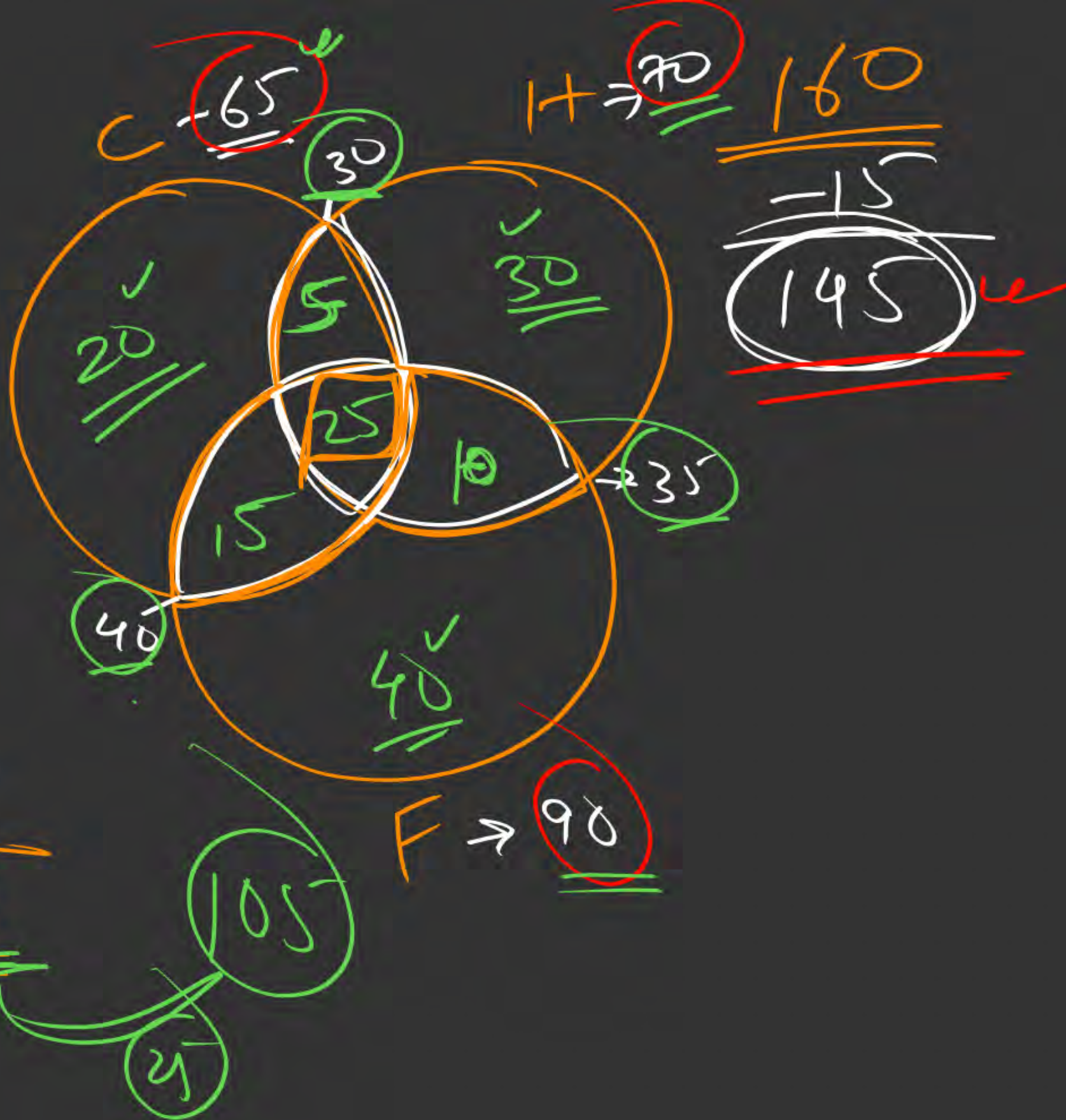
25

➤ How many students play exactly one game?

90

$$\begin{array}{r}
 65 \\
 + 70 \\
 + 90 \\
 \hline
 225
 \end{array}$$

$$\begin{array}{r}
 225 \\
 - 145 \\
 \hline
 80
 \end{array}$$





Q. During the cultural day of a college, 235 students participated. Out of them, 100 participated in art, 105 participated in music and 95 participated in dance. 20 participated in none of these three. 45 participated in exactly two of the above three events. 20 students participated in all three events.

If 45 students participated in only art, then how many students participated in both music and dance but not art?

- (a) 10 (b) 15 (c) 20 (d) 25

If 20 students participated in both art and dance but not music, then how many students participated in music only?

- (a) 55 (b) 60 (c) 65 (d) 50

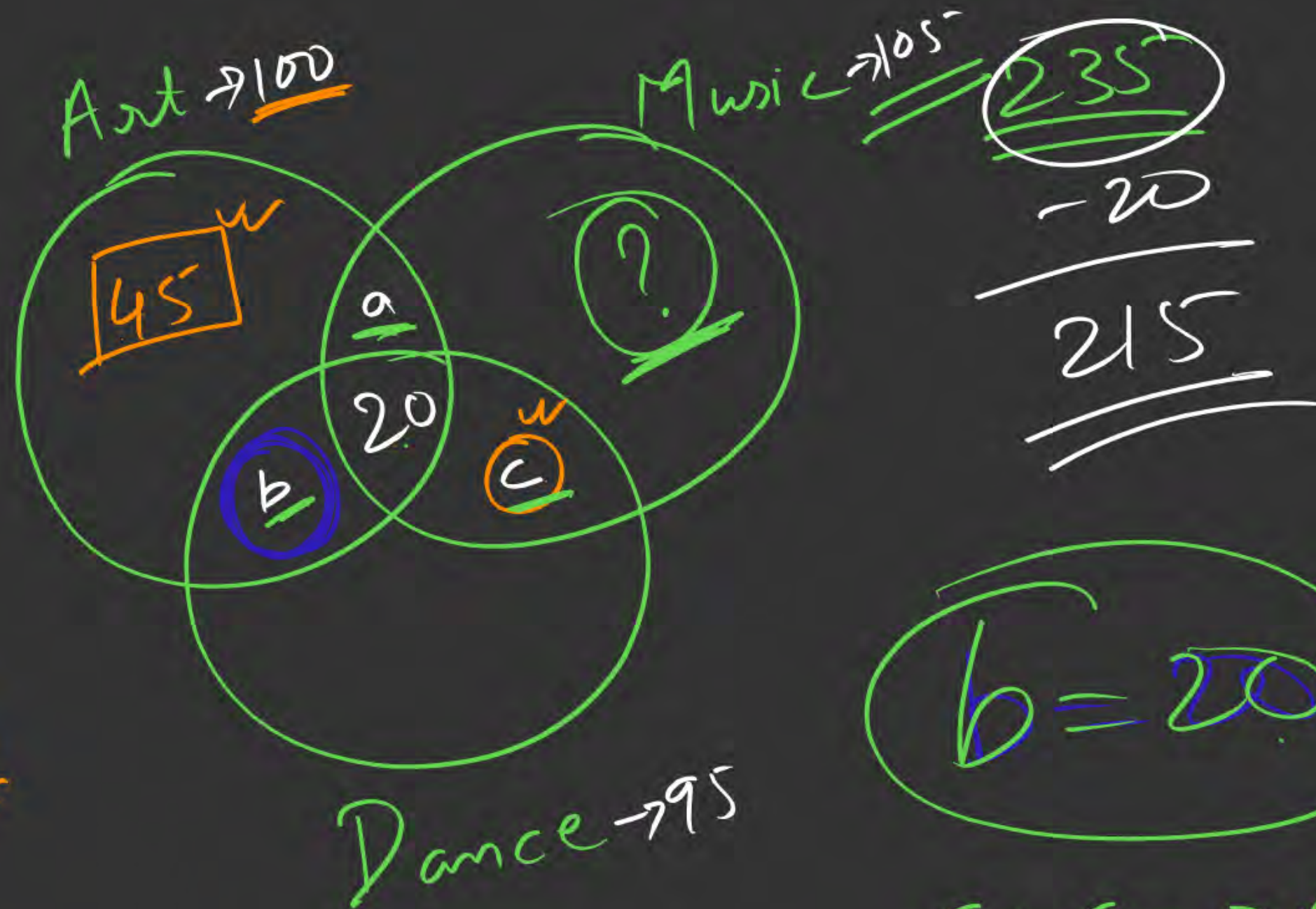
Assignment

$$\checkmark \checkmark$$

$$\boxed{a + b + c = 45}$$

$$a + b = 35$$

$$c = 10$$



$$\begin{array}{r} 235 \\ - 20 \\ \hline 215 \end{array}$$

$$b = 20$$

$$a + c = 25$$

$$105 - 45 = 60$$



Q. Given below are two statements followed by two conclusions. Which one of the following options are logically inferred?

Statement 1: Some actors are dancers. ✓

Statement 2: All dancers are fat. ✓

Conclusion I: Some actors are fat. ✓

Conclusion II: All actors are fat. ✗

Assignment



A. Only I follow



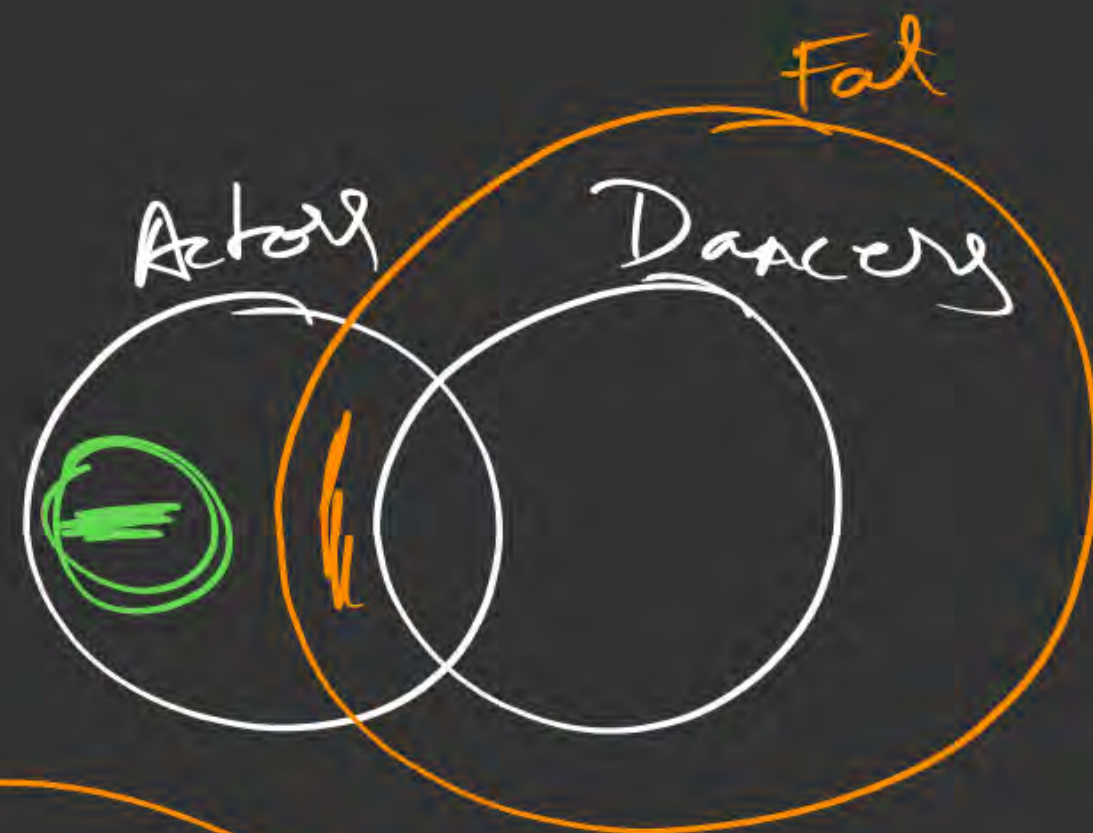
B. Only II follow



C. Both I and II follow



D. Neither I nor II follow





Spatial Aptitude

- "the ability to generate, retain, retrieve, and transform well-structured visual images"
 - It's what we do when we visualize shapes in our "mind's eye."
 - It's the mental feat that architects and engineers perform when they design buildings. The capacity that permits a chemist to contemplate the three-dimensional structure of a molecule, or a surgeon to navigate the human body.



Formation of Images

- In each of the following questions, group the given figures into three classes using each figure only once.

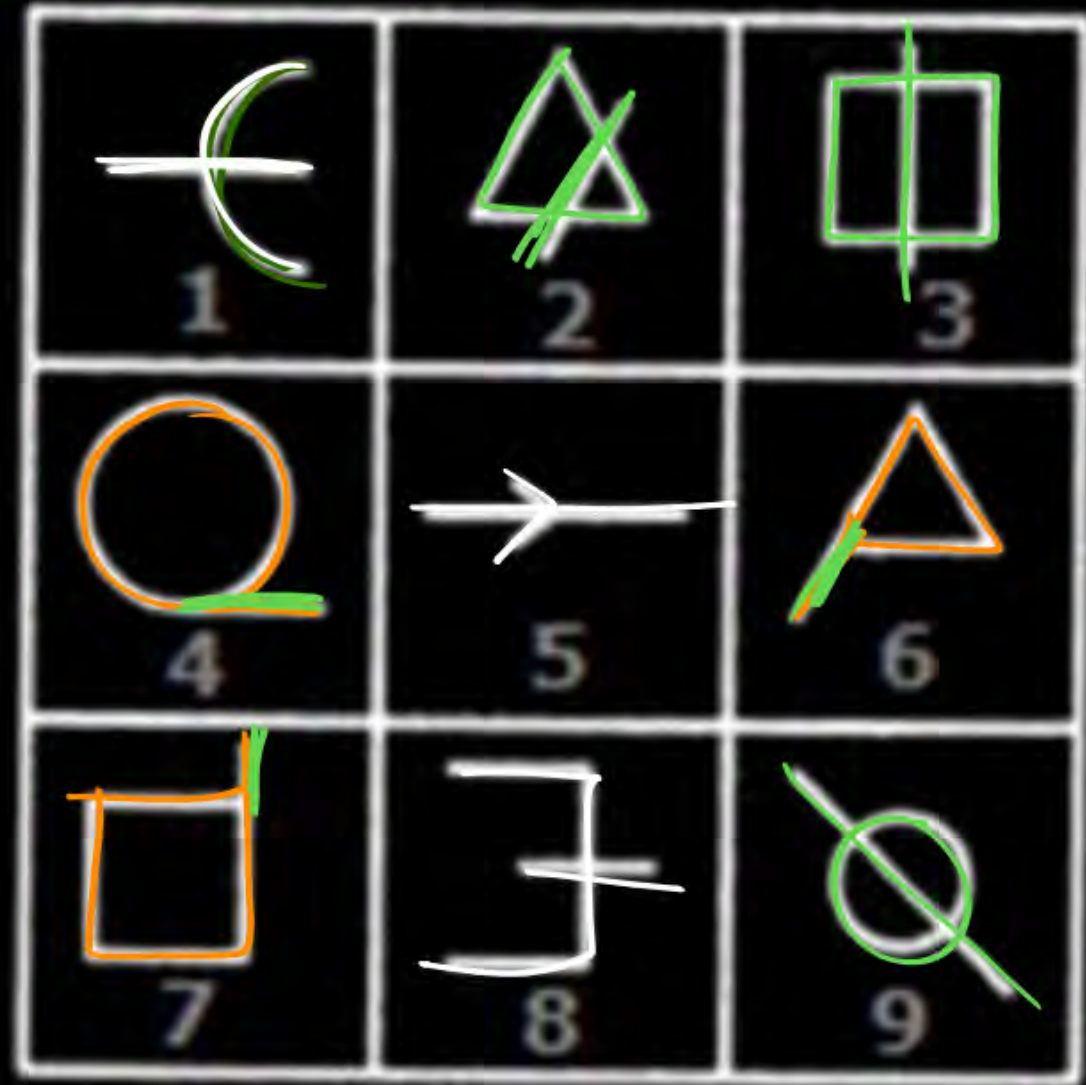


Q. Group the given figures into three classes using each figure only once.

4, 6, 7

2, 3, 9

1, 5, 8



A. 1, 3, 9 / 2, 5, 8 / 4, 6, 7



B. 1, 5, 8 / 4, 6, 7 / 2, 3, 9



C. 2, 5, 9 / 1, 3, 8 / 4, 6, 7



D. 3, 5, 8 / 1, 2, 4 / 6, 7, 9



Q. Group the given figures into three classes using each figure only once.

1, 5, 8

2, 4, 7

3, 6, 9



A. 1, 5, 8 / 2, 6, 7 / 3, 4, 9



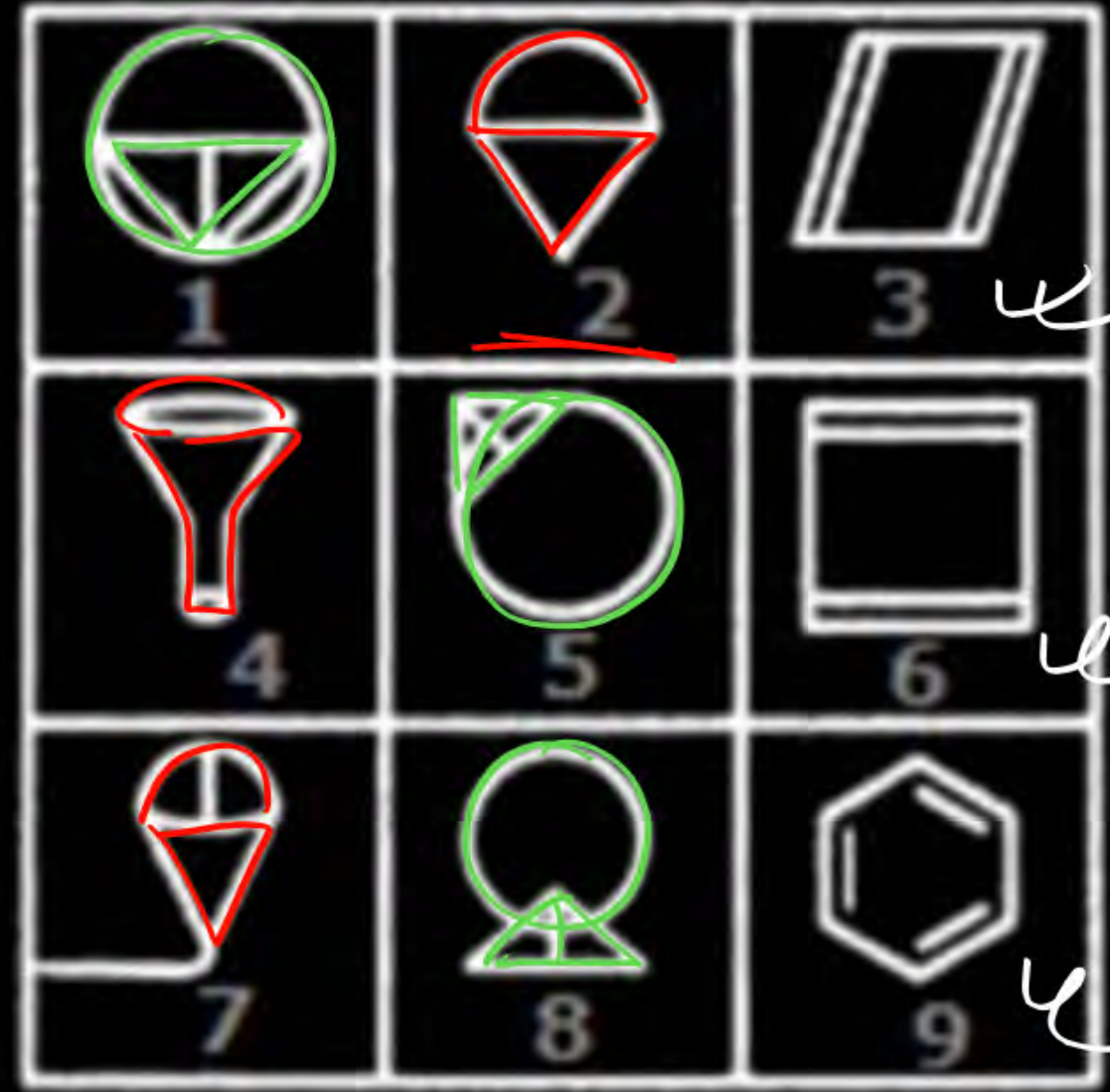
B. 1, 5, 7 / 2, 6, 8 / 3, 4, 9



C. 1, 5, 8 / 2, 4, 7 / 3, 6, 9



D. 1, 5, 8 / 2, 6, 9 / 3, 4, 7





Q.

Group the given figures into three classes using each figure only once.

1, 4, 8

3, 7, 9

2, 5, 6



A.

1, 3, 7 / 2, 4, 6 / 5, 8, 9



B.

1, 4, 6 / 2, 5, 7 / 3, 8, 9



C.

1, 4, 8 / 2, 5, 6 / 3, 7, 9



D.

1, 4, 8 / 2, 7, 9 / 3, 5, 6





Q. Group the given figures into three classes using each figure only once.



A. 1,3,6 / 4,5,8 / 2,7,9



B. 2,3,9 / 4,5,8 / 1,6,7



C. 3,8,9 / 1,2,7 / 4,5,6



D. 1,6,8 / 3,7,9 / 2,4,5

3, 7, 9

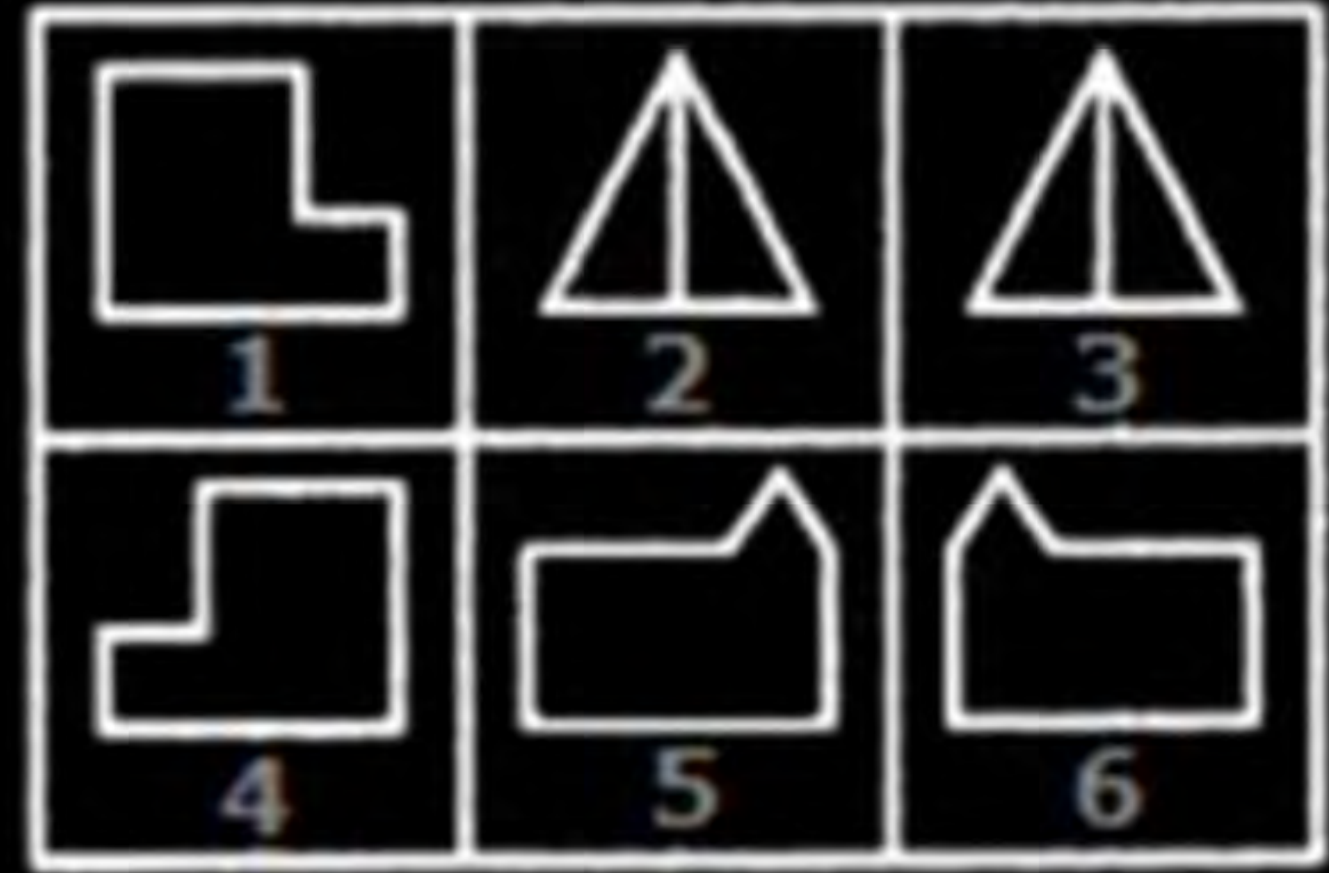
2, 4, 5

1, 6, 8





Q. Group the given figures into three classes using each figure only once.



A. 1,4 / 2,3 / 5,6



B. 1,5 / 2,6 / 4,3



C. 1,6 / 2,3 / 4,5



D. 1,2 / 3,6 / 4,5



Q. Group the given figures into three classes using each figure only once.



1,3,9 / 2,5,6 / 4,7,8



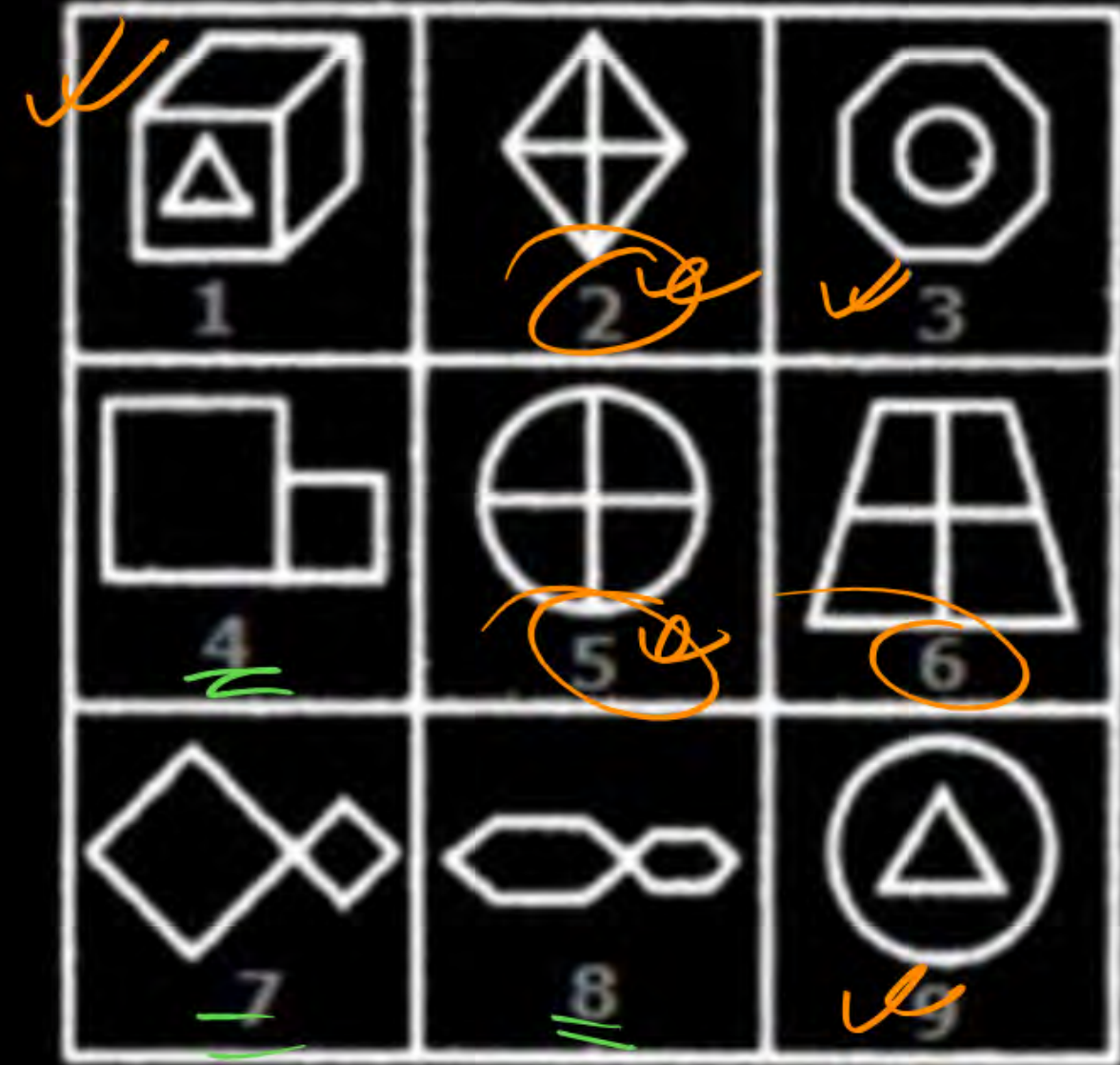
1,2,4 / 3,5,7 / 6,8,9



1,3,6 / 2,4,8 / 5,7,9



1,3,9 / 2,7,8 / 4,5,6





Q. Group the given figures into three classes using each figure only once.



A. 1,7,9 / 3,5,8 / 2,4,6



B. 1,4,7 / 2,5,8 / 3,6,9



C. 1,5,7 / 2,4,8 / 3,6,9



D. 1,5,7 / 2,4,6 / 3,9,8





Q. Group the given figures into three classes using each figure only once.

3, 5, 8

1, 6, 9

2, 4, 7



1, 3, 5 | 2, 4, 7 | 6, 8, 9



1, 5, 7 | 2, 3, 6 | 4, 8, 9



1, 3, 5 | 2, 6, 7 | 4, 8, 9



1, 6, 9 | 2, 4, 7 | 3, 5, 8



1

2

3

4

5



6

7

8

9



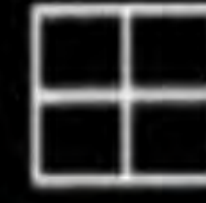
Q.

Group the given figures into three classes using each figure only once.

1, 7, 8

3, 5, 6

2, 4, 9



✓ 1

2

3

4

5



6

✓ 7

✓ 8

9



A.

1, 2, 4 | 3, 5, 6 | 7, 8, 9



B.

1, 7, 8 | 2, 3, 6 | 4, 5, 9



C.

1, 3, 4 | 2, 8, 9 | 5, 6, 7



D.

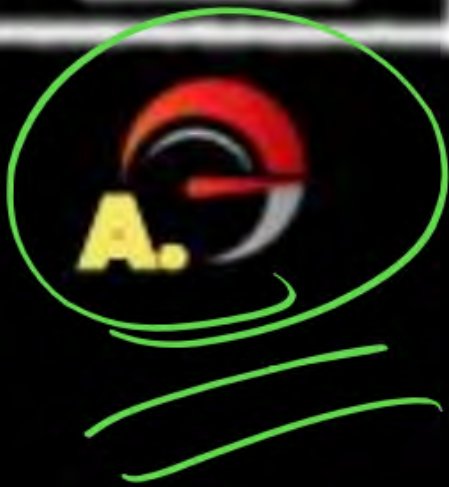
1, 7, 8 | 3, 5, 6 | 2, 4, 9



- In each problem, out of the five figures marked (1), (2), (3), (4) and (5), four are similar in a certain manner. However, one figure is not like the other four. Choose the figure which is different from the rest.

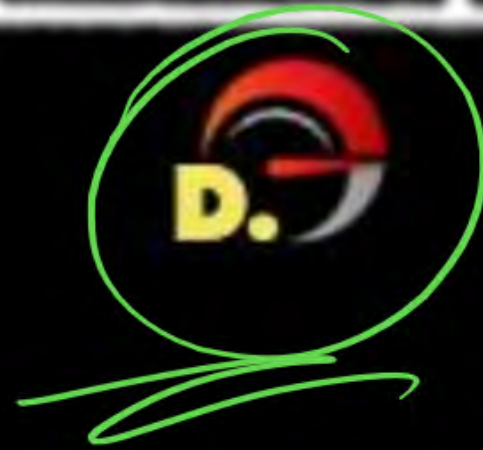


Q. Choose the figure which is different from the rest





Q. Choose the figure which is different from the rest





Q. Choose the figure which is different from the rest





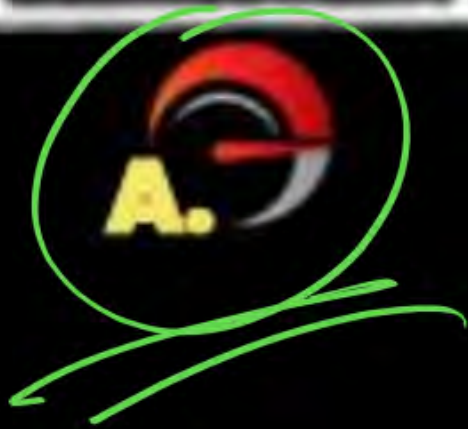
Q. Choose the figure which is different from the rest





Q. Choose the figure which is different from the rest

Top Right





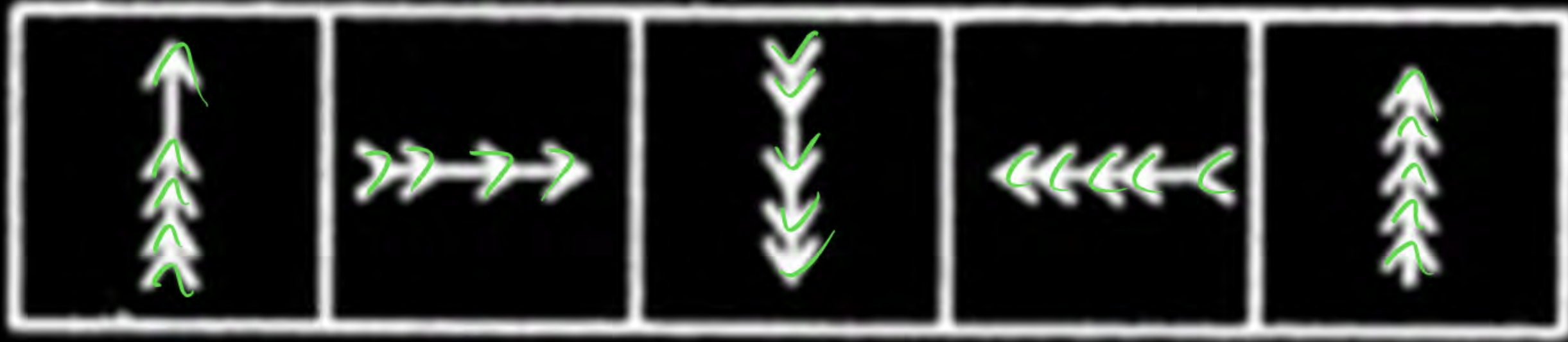
Q. Choose the figure which is different from the rest



Amichorakura



Q. Choose the figure which is different from the rest





Q. Choose the figure which is different from the rest





Q. Choose the figure which is different from the rest

Assignment





Q. Choose the figure which is different from the rest

Assignment





Q. Choose the figure which is different from the rest

Assignment





Q. Choose the figure which is different from the rest



Assignment



Q. Choose the figure which is different from the rest



Assignment



Q. Choose the figure which is different from the rest

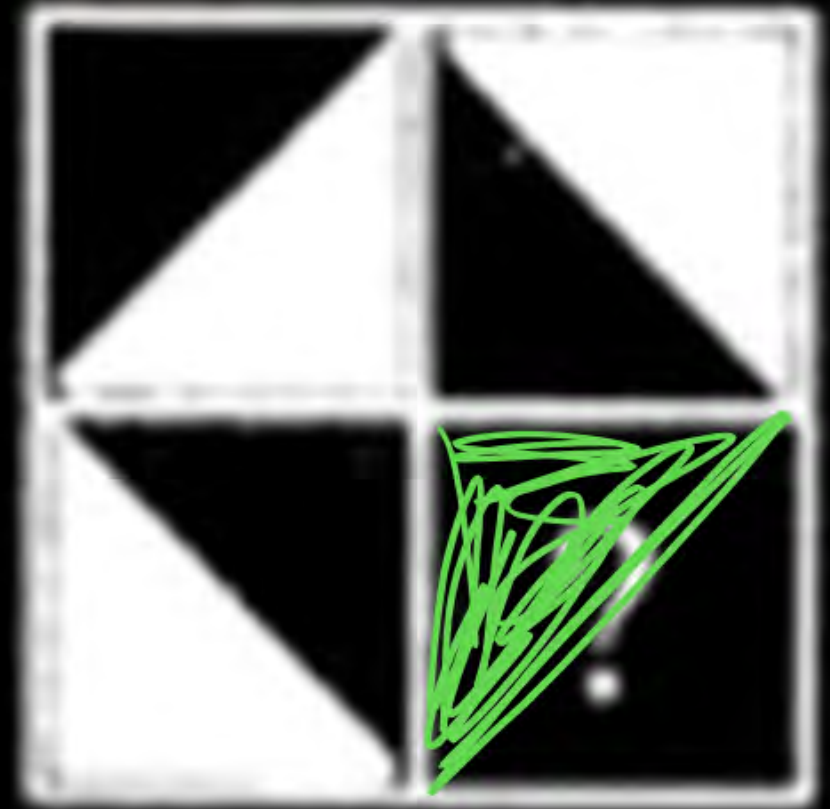


Assignment



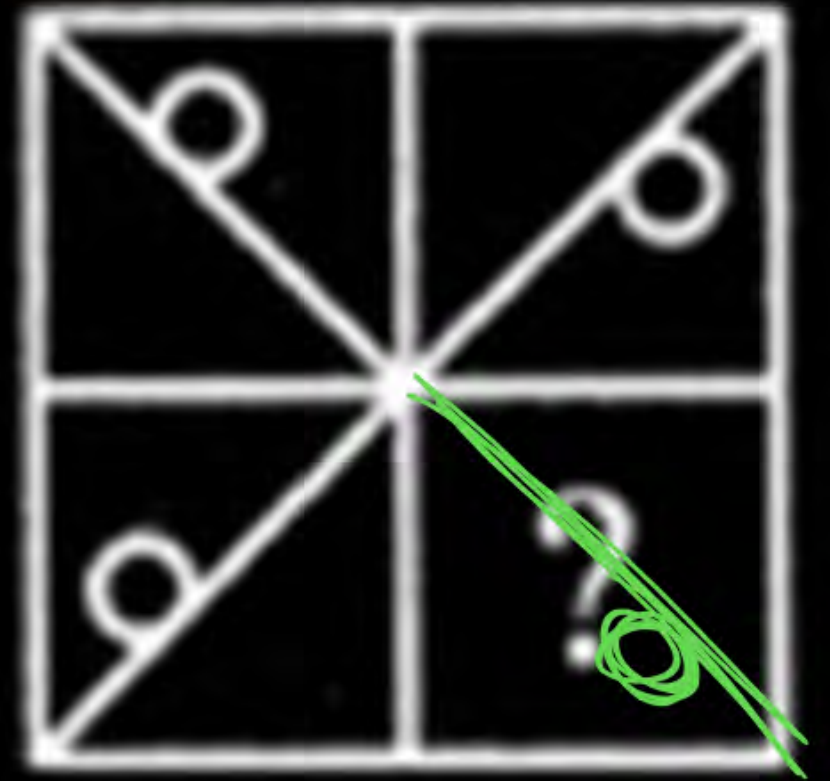
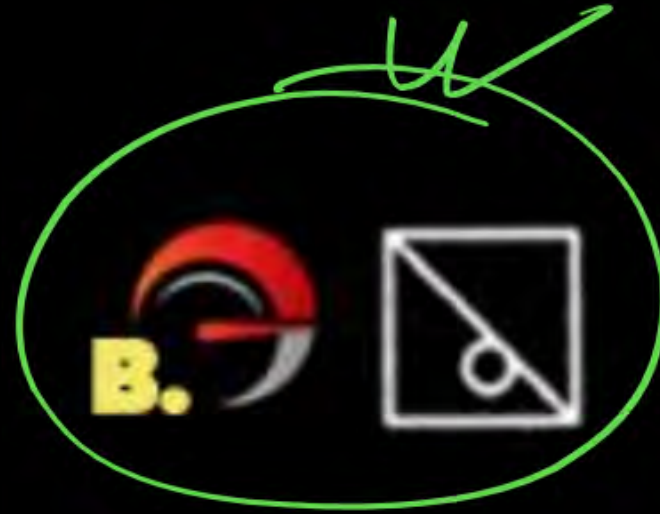
Q.

Identify the figure that completes the pattern.





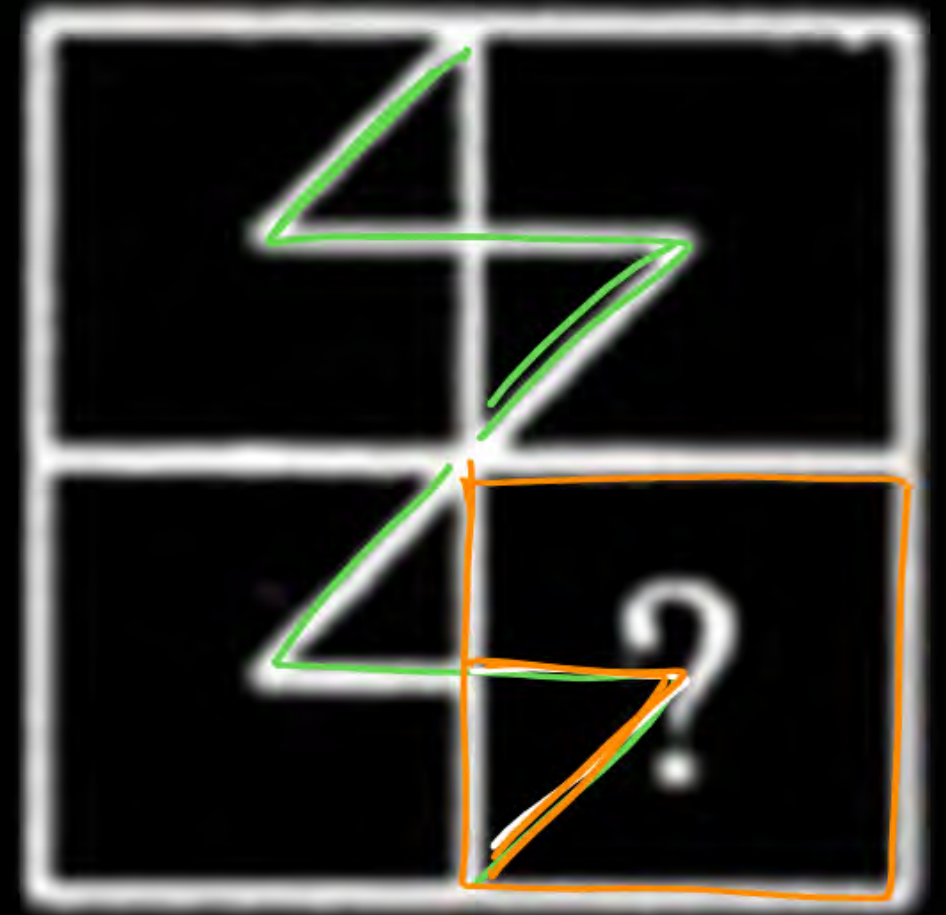
Identify the figure that completes the pattern.





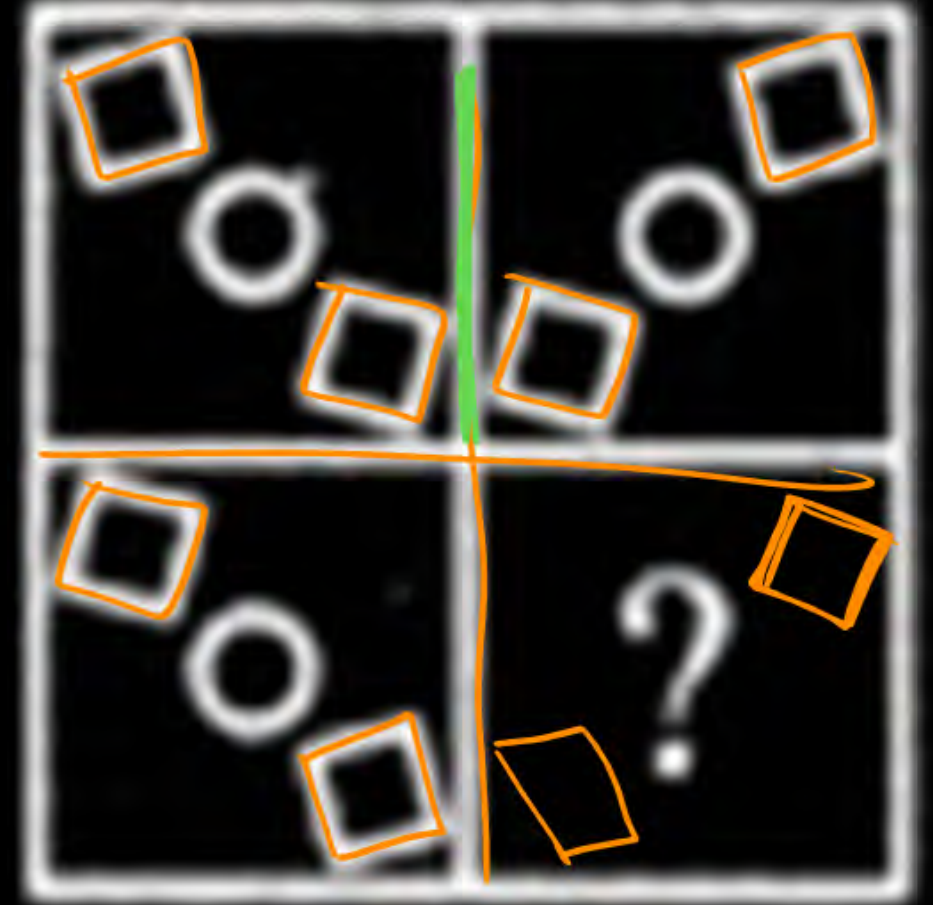
Q.

Identify the figure that completes the pattern.



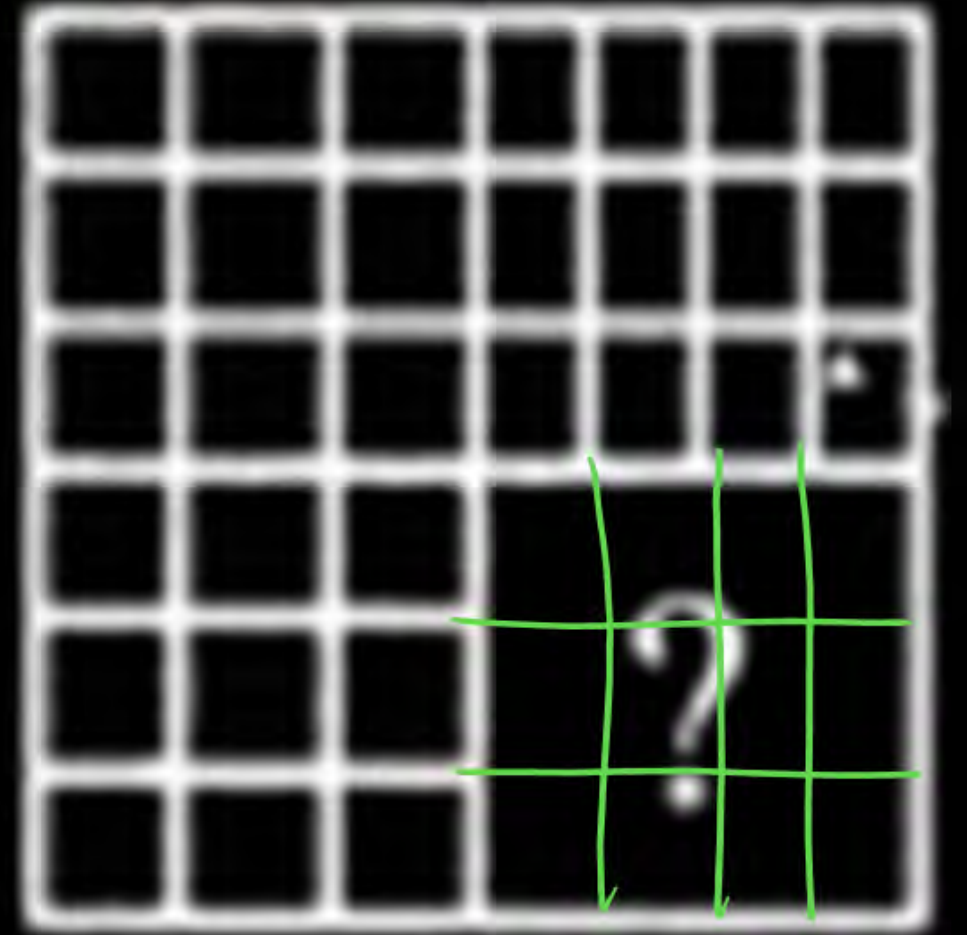


Q. Identify the figure that completes the pattern.





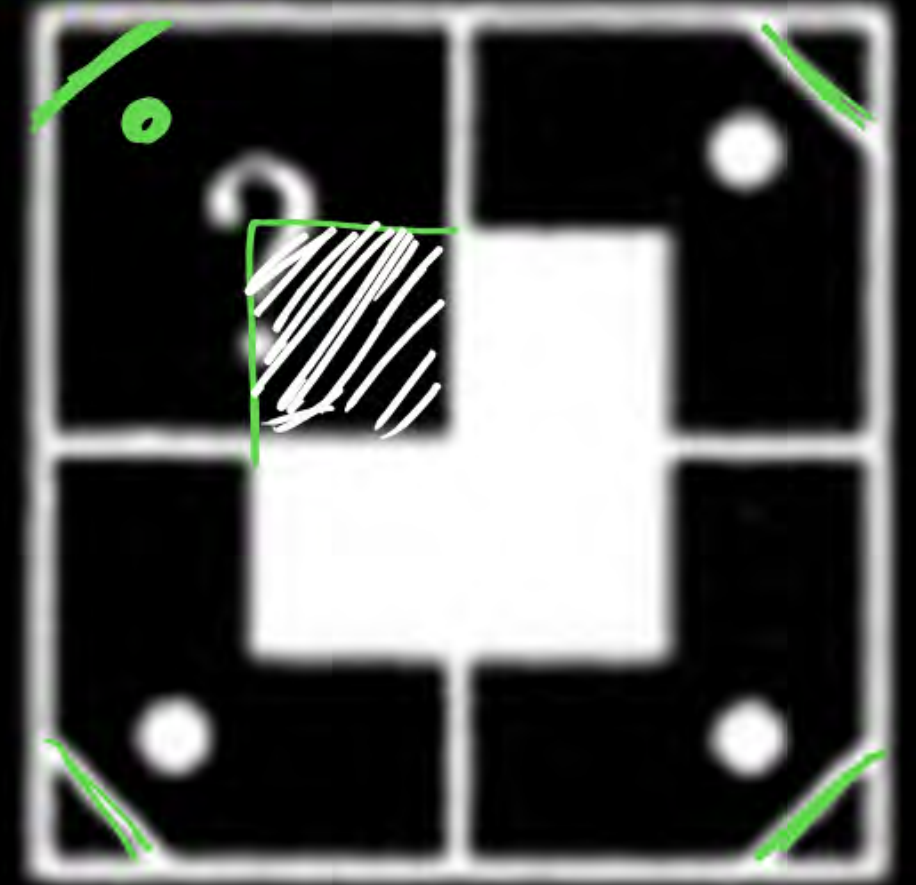
Identify the figure that completes the pattern.





Q.

Identify the figure that completes the pattern.



~~A.~~



~~B.~~



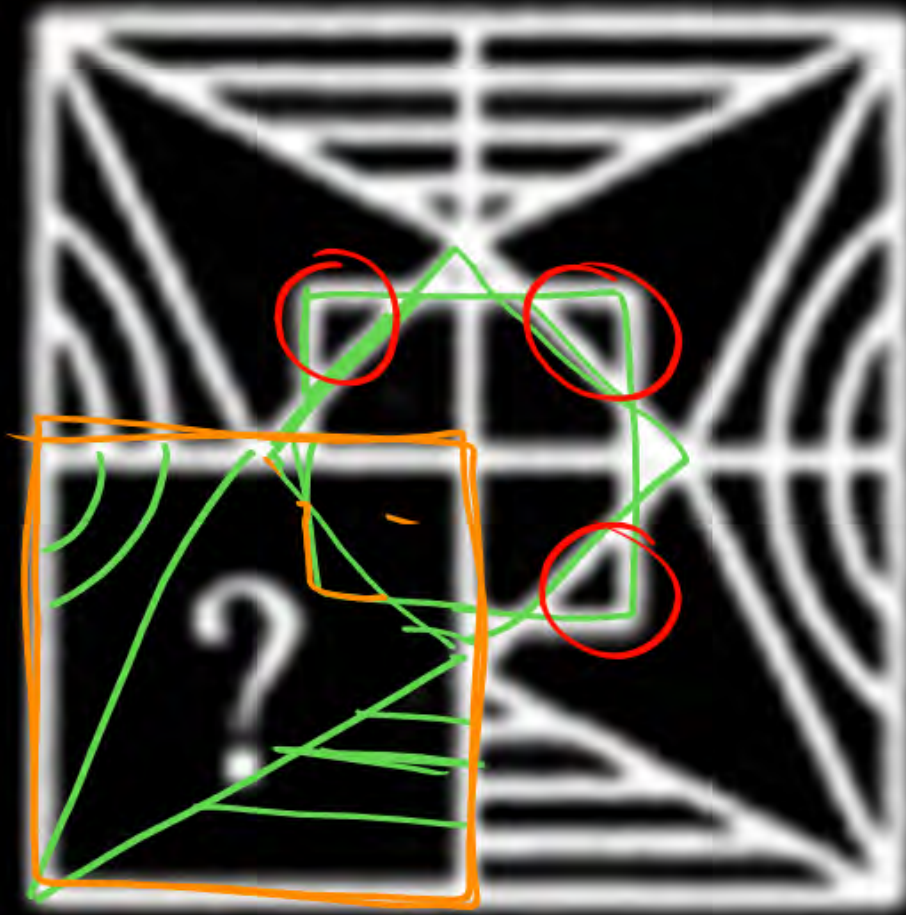
~~C.~~



D.



Identify the figure that completes the pattern.





Identify the figure that completes the pattern.

Assignment



A.



B.



C.



D.



Q.

Identify the figure that completes the pattern.



Assignment



Identify the figure that completes the pattern.



Assignment



Q.

Identify the figure that completes the pattern.



A.



B.



C.



D.



Assignment

