elevate

UCAT

ABSTRACT REASONING

LESSON ONE

THEORY

The fourth subtest of the UCAT test is Abstract Reasoning. This subtest requires candidates to complete 50 questions in 12 minutes. This gives candidates approximately 14.4 seconds to complete each question (an increase of 0.4 seconds per question from 2021).

The information given in an AR question can be split into two parts:

- Characters - Information which is actually needed to decipher the rule/pattern
- Distractors – Information which is not needed to decipher the rule/pattern

The difficulty of an AR question rests on the following points:

- Familiarity with the pattern
- Number of distractors
- Time restraint

The way to become competent efficiently is by attacking the first two of these aspects: Exposure to a large variety of patterns, and making a list of the unfamiliar patterns. Revising this list frequently will make candidates much more familiar with the different patterns and distractors that are not already wired subconsciously into our brain. By hardwiring these unfamiliar patterns regularly, candidates will be able to recognise patterns subconsciously, thus enhancing speed.

In AR Lesson (III), all students will receive a large glossary of common patterns.

SET A/B/N AND SET A/B

2 sets of 6 shapes. All the shapes in each set follow a common pattern (i.e. All the shapes in Set A follow a certain pattern, and all the shapes in set B follow a common pattern).

There are 4 main types of patterns:

- Counting
    - The pattern is number based (e.g. number of white shapes = 1 + number of black shapes for set A, and opposite for Set B, number of intersections is odd/even)
- Position
    - A certain shape can be found in a certain position all the time (top left corner) or a shape's position is dependent on the existence or position of another shape (e.g. shape A is always right of shape B, shape A is always above shape B)
- Rotation
    - The shapes undergo a rotation based on some other aspect of the shapes (e.g. the shapes rotate 45° to the right in the presence of another shape or depending on the number of shape)
- Colour
    - The pattern has some relationship with colour of the shapes
        - E.g. Set A: Shapes with an odd number of sides are coloured. Shapes with an even number of sides are not coloured. Set B would be vice versa (odd sided no colour, even sided would be shaded)

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However, more complex patterns can contain a combination of 2 or three subtypes (e.g Shape A is present in the top left corner when there are a prime number of shapes, shape B is present in top right corner when there are an even number of shapes)

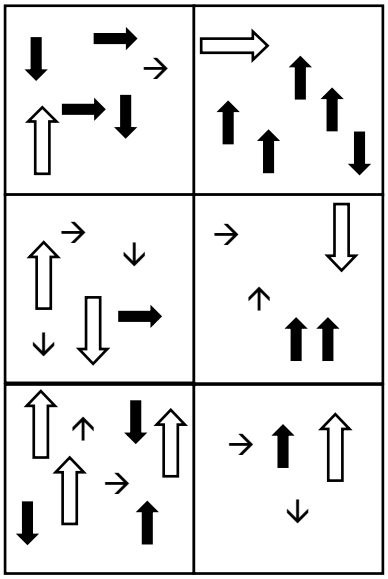
NOTE: SET A/B IS DIFFERENT TO SETA/B/N.

The difference between SetA/B/N and SetA/B is for set A/B/N you are given one shape in the question and asked whether is belongs in Set A, B or neither set. For Set A/B you are asked to choose which one of the four options contains the shape that belong in SetA or which of the four options belongs in Set B. Refer to questions 26-30 for Set A/B questions.

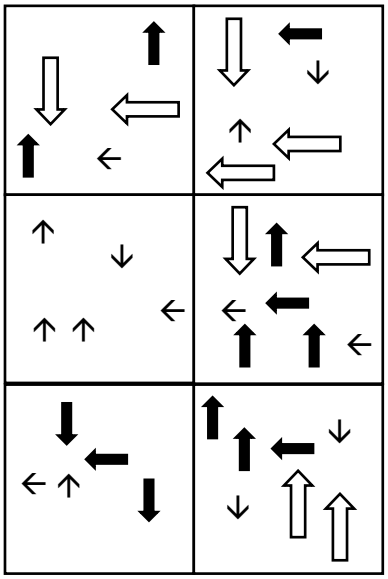
EXAMPLE QUESTION

Questions 1-5 refer to the following sets.

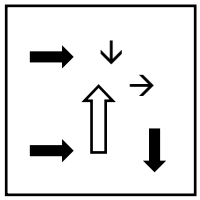
Set A



Set B



1. Does this test shape belong to Set A, Set B or neither?



a. Set A
b. Set B
c. Neither

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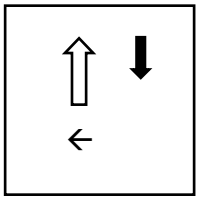
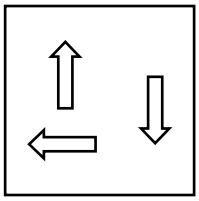
2. **Does this test shape belong to Set A, Set B or neither?**



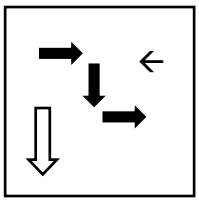
a. Set A
b. Set B
c. Neither

3. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

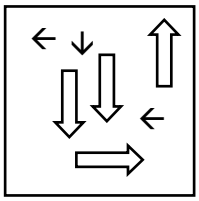
4. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

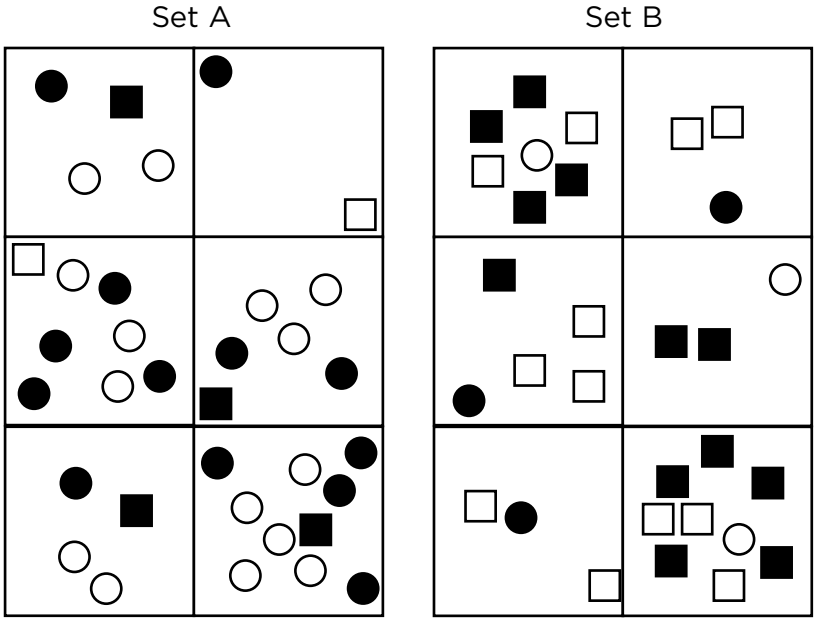
THEORY

5. **Does this test shape belong to Set A, Set B or neither?**

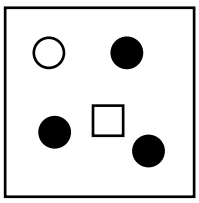


a. Set A
b. Set B
c. Neither

Questions 6-10 refer to the following sets.



6. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

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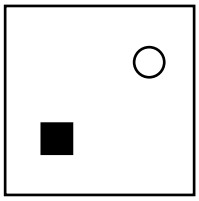
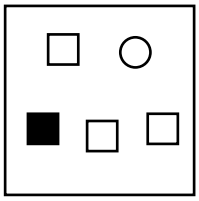
7. **Does this test shape belong to Set A, Set B or neither?**



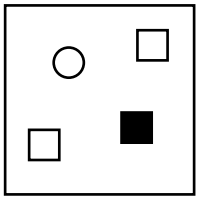
a. Set A
b. Set B
c. Neither

8. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

9. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

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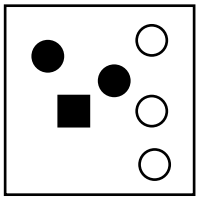
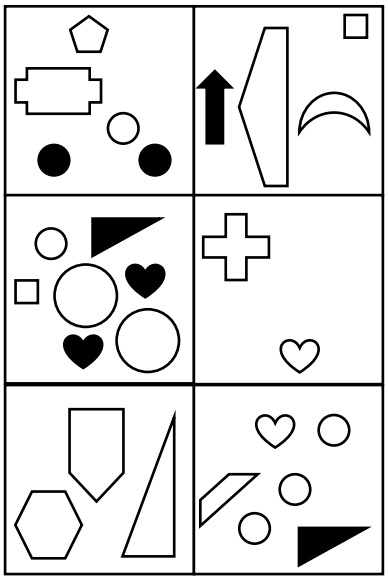
10. **Does this test shape belong to Set A, Set B or neither?**



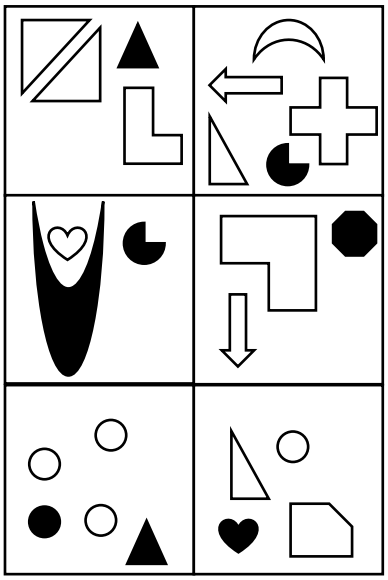
a. Set A
b. Set B
c. Neither

Questions 11-15 refer to the following sets.

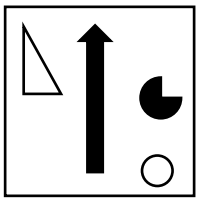
Set A



Set B



11. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

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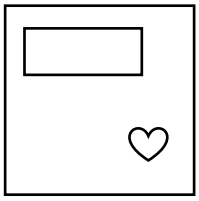
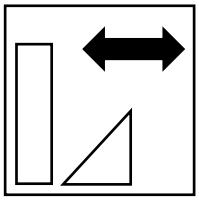
12. **Does this test shape belong to Set A, Set B or neither?**



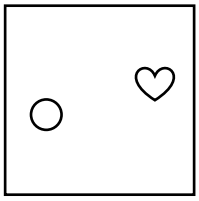
a. Set A
b. Set B
c. Neither

13. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

14. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

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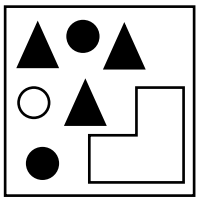
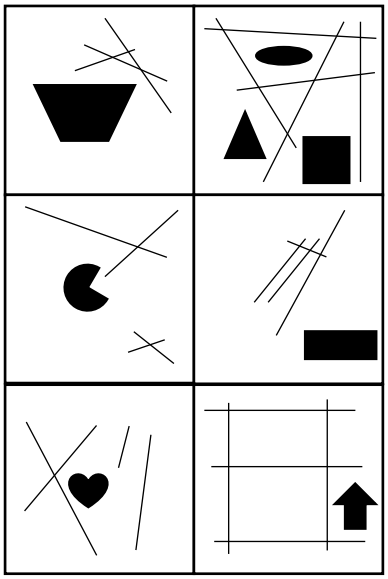
15. **Does this test shape belong to Set A, Set B or neither?**



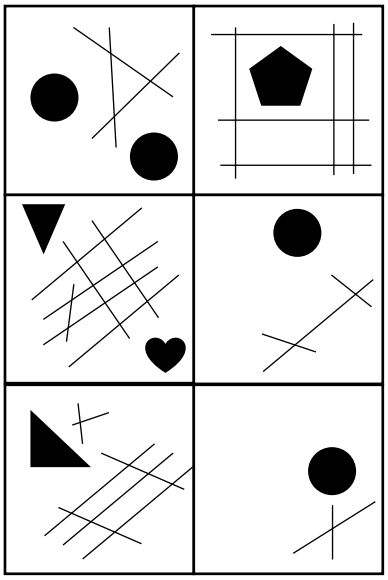
a. Set A
b. Set B
c. Neither

Questions 16-20 refer to the following sets.

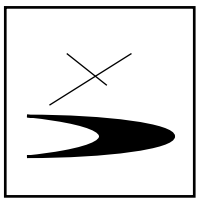
Set A



Set B



16. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

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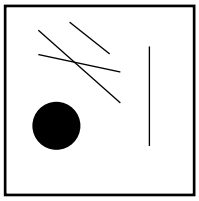
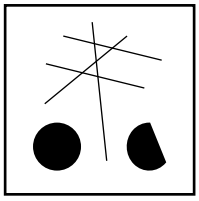
17. **Does this test shape belong to Set A, Set B or neither?**



a. Set A
b. Set B
c. Neither

18. **Does this test shape belong to Set A, Set B or neither?**

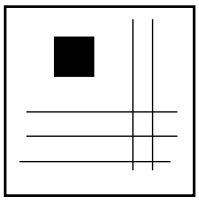


a. Set A
b. Set B
c. Neither

19. **Does this test shape belong to Set A, Set B or neither?**

a. Set A
b. Set B
c. Neither

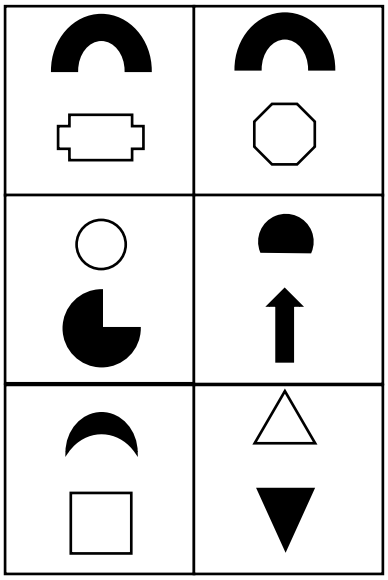
20. Does this test shape belong to Set A, Set B or neither?



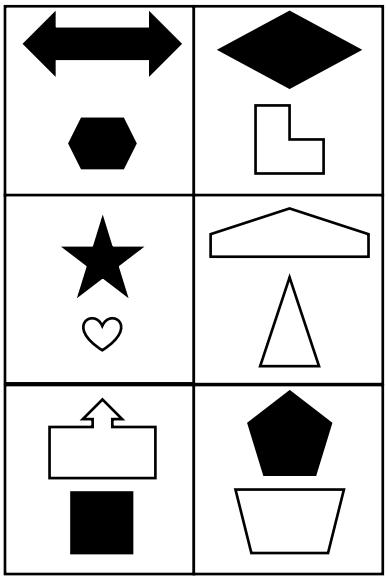
a. Set A
b. Set B
c. Neither

Questions 21-25 refer to the following sets.

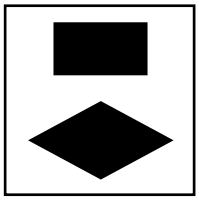
Set A



Set B



21. Does this test shape belong to Set A, Set B or neither?



a. Set A
b. Set B
c. Neither

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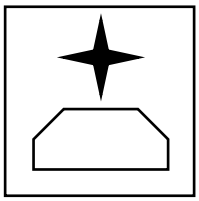
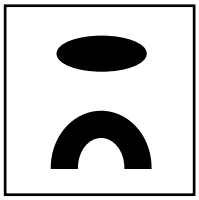
22. Does this test shape belong to Set A, Set B or neither?



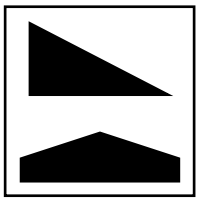
a. Set A
b. Set B
c. Neither

23. Does this test shape belong to Set A, Set B or neither?



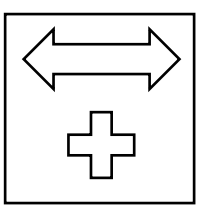
a. Set A
b. Set B
c. Neither

24. Does this test shape belong to Set A, Set B or neither?



a. Set A
b. Set B
c. Neither

25. Does this test shape belong to Set A, Set B or neither?

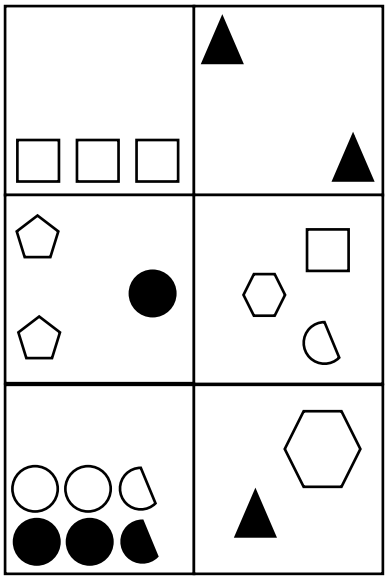


a. Set A
b. Set B

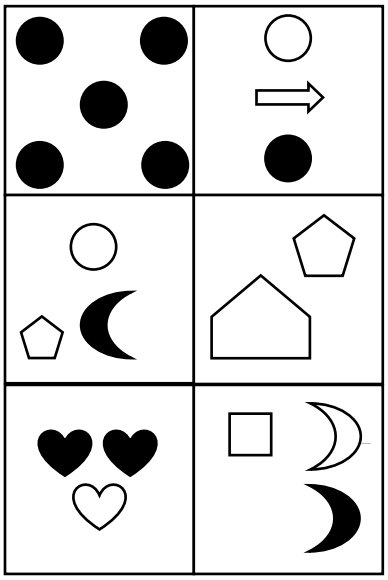
c. Neither

Questions 26-30 refer to the following sets.

Set A

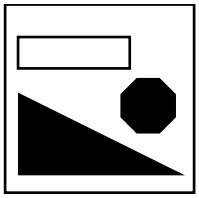


Set B

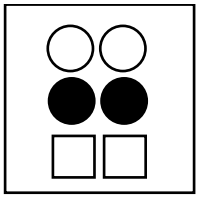


26. Which of the following test shapes belongs in Set A?

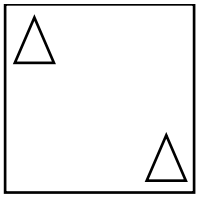
a.



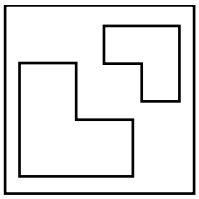
b.



c.



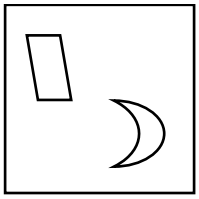
d.



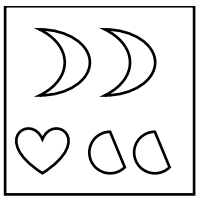
THEORY

27. Which of the following test shapes belongs in Set B?

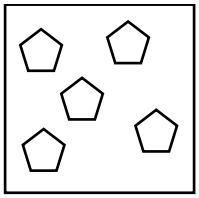
a.



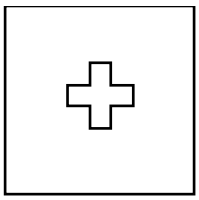
b.



c.

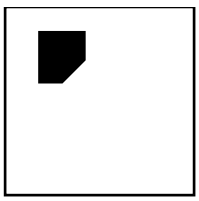


d.

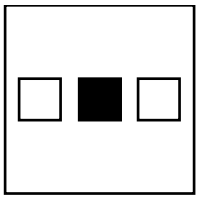


28. Which of the following test shapes belongs in Set B?

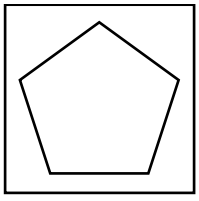
a.



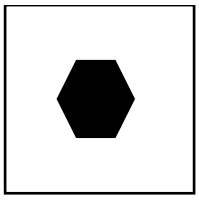
b.



c.



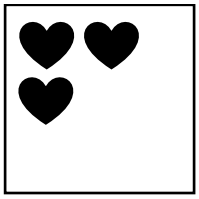
d.



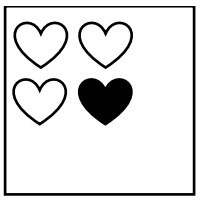
THEORY

29. Which of the following test shapes belongs in Set A?

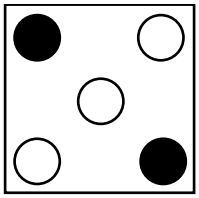
a.



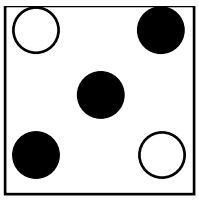
b.



c.

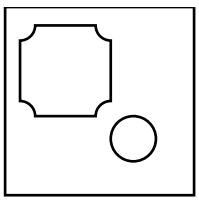


d.

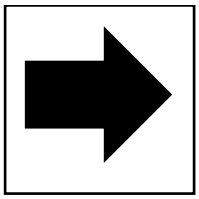


30. Which of the following test shapes belongs in Set B?

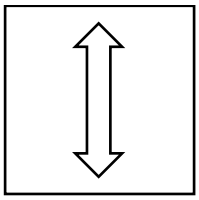
a.



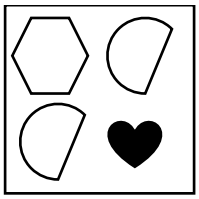
b.



c.



d.



THEORY

COMPLETE THE SERIES

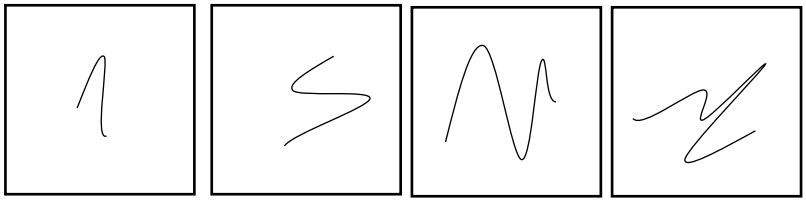
In these types of questions, you are given a set of 4 shapes in a linear fashion, and asked to choose which answer option contains the figure that completes the series.

These questions usually follow the counting, position and rotation subtypes:

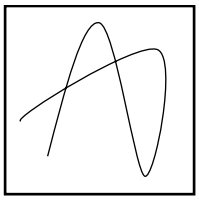
- Counting
    - The number of lines follows the prime number order (2, 3, 5, 7, 11...)
- Position
    - Shape A always shuttles between the outer corners of the grid, while Shape B always moves in the inner corners of the grid.
    - Coloured segment moves by 1 clockwise every time
- Rotation
- Shape rotates 45°, then 90°, then 135°...

EXAMPLE QUESTION

1. Which figure completes the series?

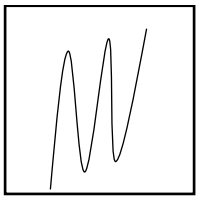


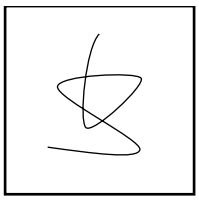
a.

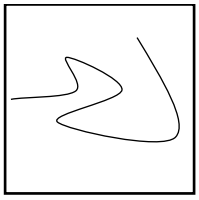


b.

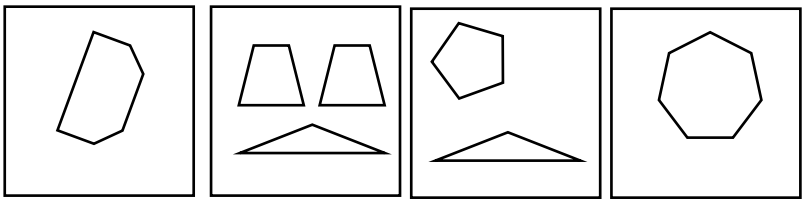
c.

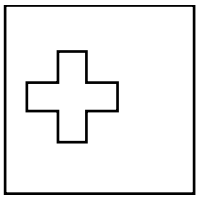


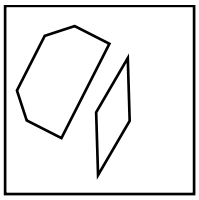
d. 

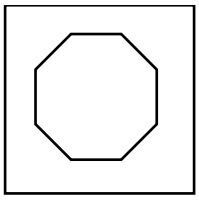
e. 

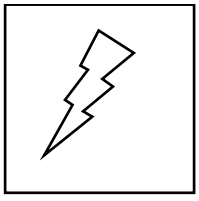
2. Which figure completes the series?



a. 

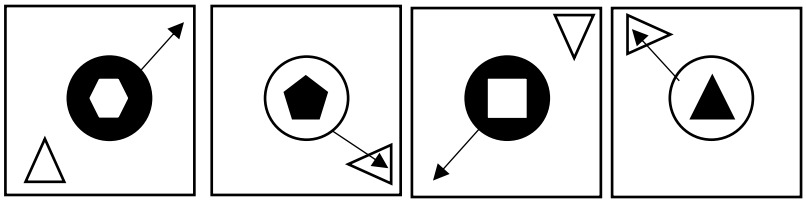
b. 

c. 

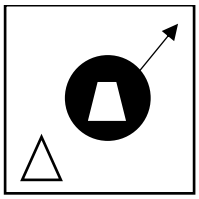
d. 

THEORY

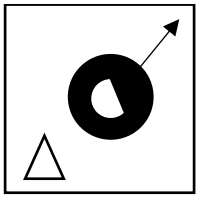
3. **Which figure completes the series?**



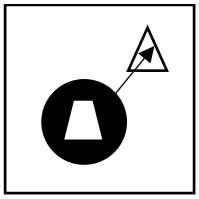
a.



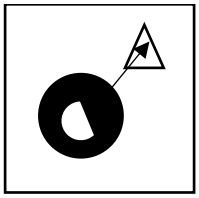
b.



c.



d.



THEORY

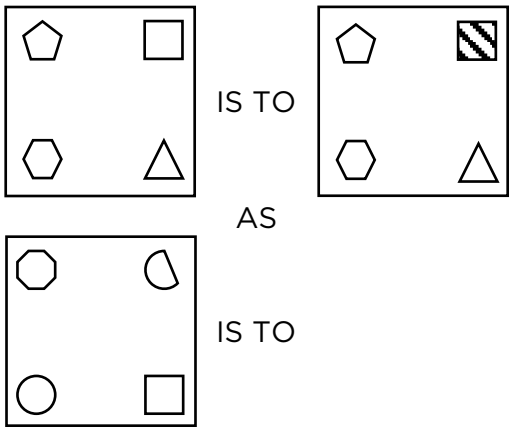
COMPLETE STATEMENT

These questions contain 2 statements containing 3 shapes. Statement contains shape 1 and 2, in the following manner: “Shape 1 is to Shape 2, as shape 3 is to ?”. Candidates must choose which answer option correctly follows the analogy.

The way to approach these questions is to compare shape 1 and 2 and see the relationship between the two shapes. Candidates then must apply the relationship to 3 and deduce which answer option best fits the analogy.

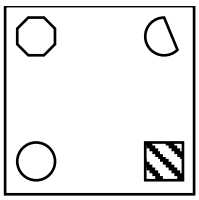
EXAMPLE QUESTION

1. **Consider the following.**

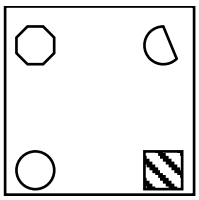


Which figure completes the statement?

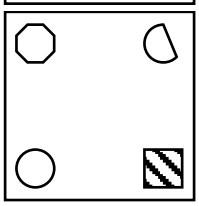
a.



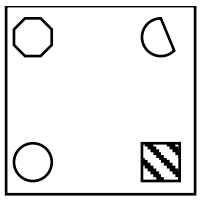
b.



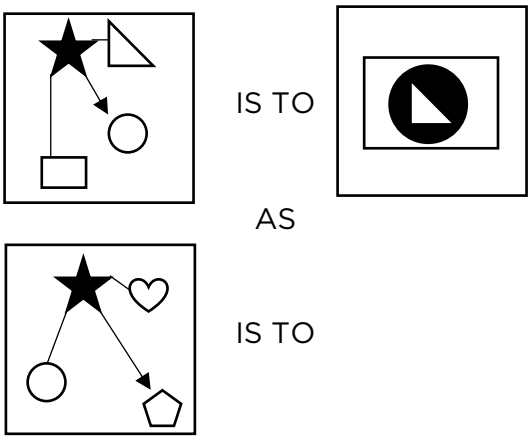
c.



d.

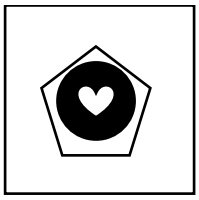


2. **Consider the following.**

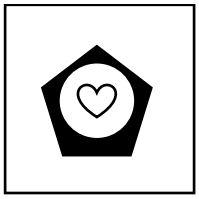


Which figure completes the statement?

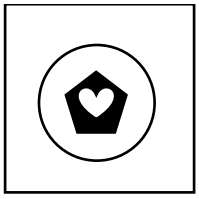
a.



b.



c.



d.