

# Non-Verbal Reasoning Tests

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# Recruitment process

When applying for jobs you may come across some, if not all, of the following stages in the recruitment process:

- Completion of an online application form
- Submission of a CV and cover letter
- Tests (assessing skills appropriate for the job)\*
- Interview (face to face, video or telephone)
- Assessment Centre (online/virtual or actual)

\* Tests can occur at any stage of the recruitment process

# Common assessment tools

- Ability or Aptitude Test

Including numerical reasoning, verbal reasoning, non-verbal reasoning

- Personality Questionnaire

Less commonly used in recruitment

- Situational Judgement Test (SJT)

Usually designed specifically for the needs of the job

# Current innovations in recruitment

Some of the large organisations in the UK that recruit students and graduates to internships, placements or graduate schemes are using new methods of assessment during selection e.g.

- Online games & videos mirroring typical work scenarios & requiring decisions
- Video interviews recorded online by the applicants & reviewed by the recruiter

# Ability Tests

- Measure a specific ability or abilities required for a job
- Often bought from specialist companies

## *Examples:*

- numerical reasoning
- verbal reasoning
- non-verbal reasoning (diagrammatical, inductive, logical)
- critical thinking

# Non-Verbal Reasoning Tests

- Are often used to assess ability to problem solve & to think analytically
- Do not require prior knowledge
- Examples include:
  - diagrammatic reasoning
  - logical reasoning
  - inductive reasoning

# Non-Verbal Reasoning Tests: questions

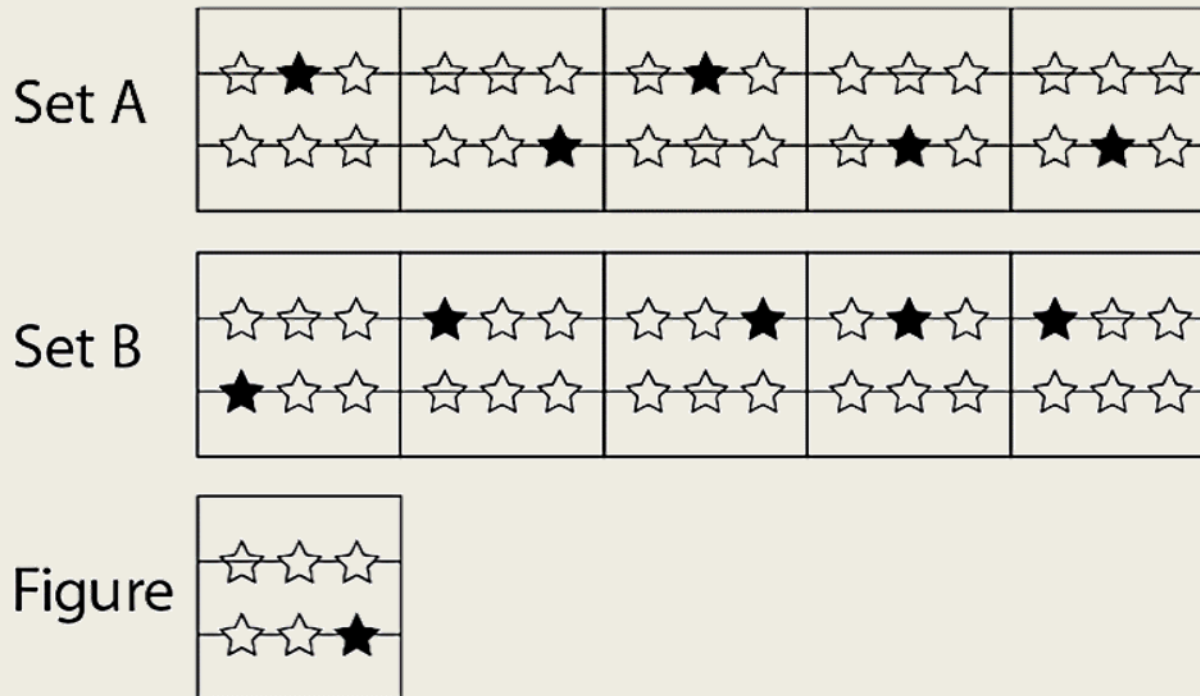
- Questions may use a series of different configurations of shapes that form a logical sequence
- The task is often to identify a missing shape in the sequence or decide which configuration should come next
- The answer is often multiple choice
- Similar questions may be used as part of the entrance exams for some schools in the UK

# Numerical Reasoning Practice Questions

- The examples on the following slides have been taken, with permission, from a practice test on the Assessment Day website [www.assessmentday.co.uk](http://www.assessmentday.co.uk)



# Diagrammatic Reasoning Example Question



Which set does the Figure belong to?

a) Set A

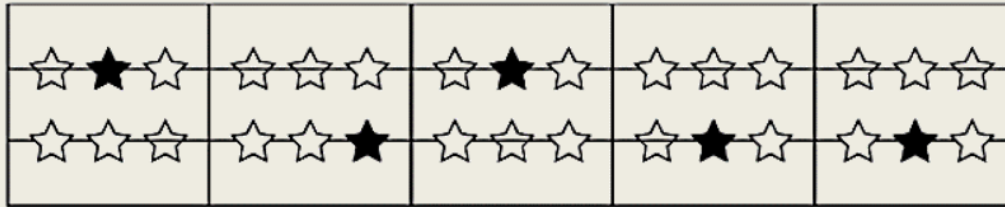
b) Set B

c) Neither set A nor set B

Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Diagrammatic Reasoning - ANSWER

Set A



Set A: Each box contains exactly one shaded star and two stars behind the lines.

Set B



Set B: Each box contains exactly one shaded star and one star behind the lines.

Figure

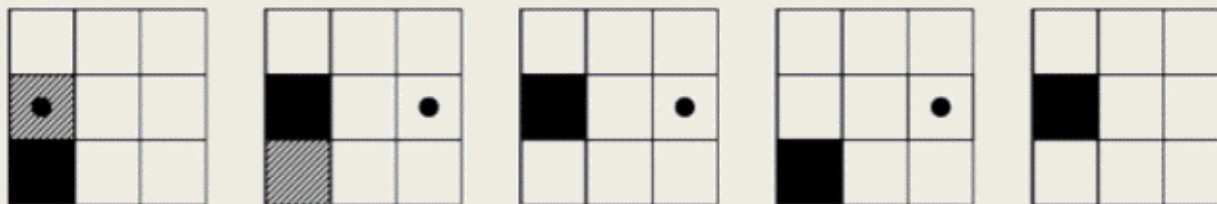
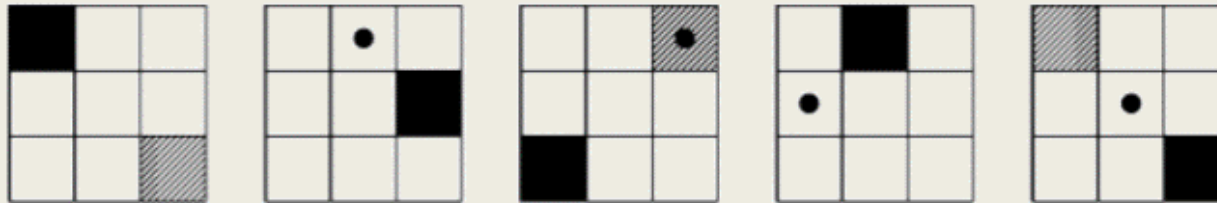


Figure: The Figure contains one shaded star and one star behind the lines.

**Answer:** The Figure belongs to **set B**.

Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Inductive Reasoning Example Question



A

B

C

D

E

Which of the five A-E figures is next in the sequence?

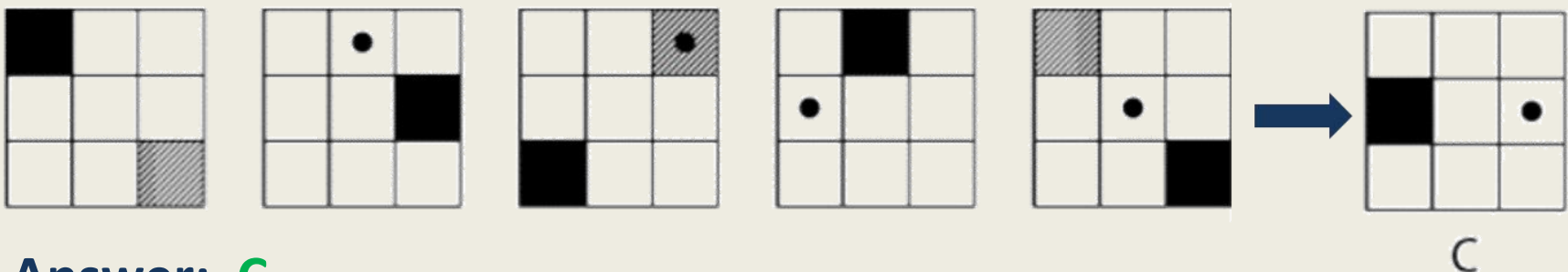
Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Inductive Reasoning - ANSWER

1<sup>st</sup> Rule: Each step, the shaded square moves 3 squares clockwise round the edge of the figure.

2<sup>nd</sup> Rule: Each step, the cross-hatching moves 1 square anticlockwise round the edge of the figure, disappearing behind the shading when the two coincide.

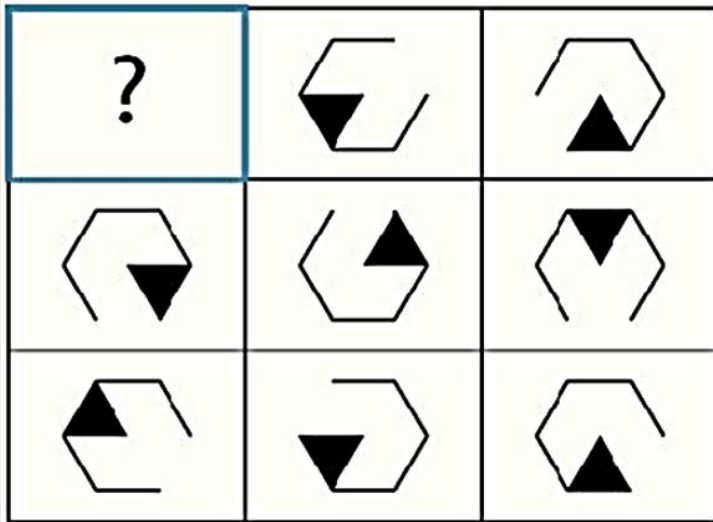
3<sup>rd</sup> Rule: The circle (which starts behind the shaded square in figure 1) moves 1 square left to right, starting again at the left of the figure when it drops down a row.



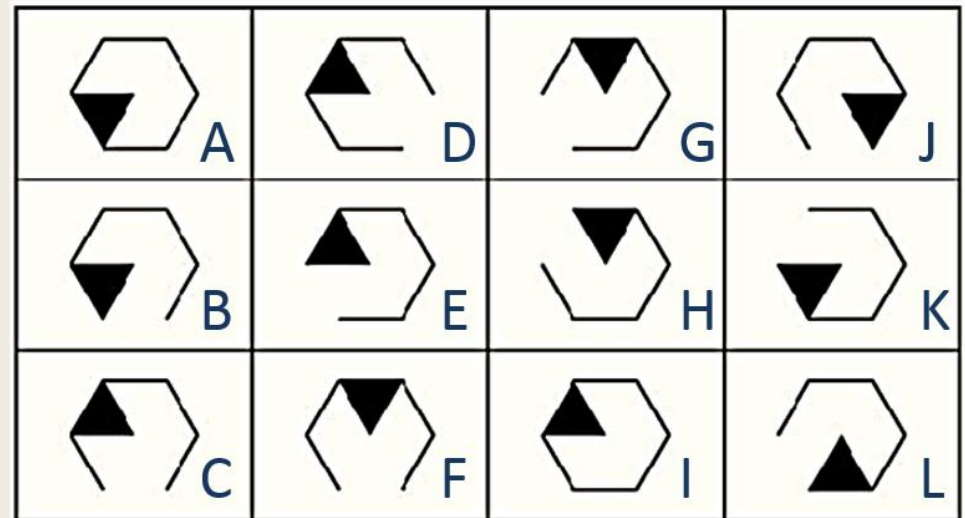
Answer: C

Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Logical Reasoning Example Question



Which of the figures A – L replaces the question mark?

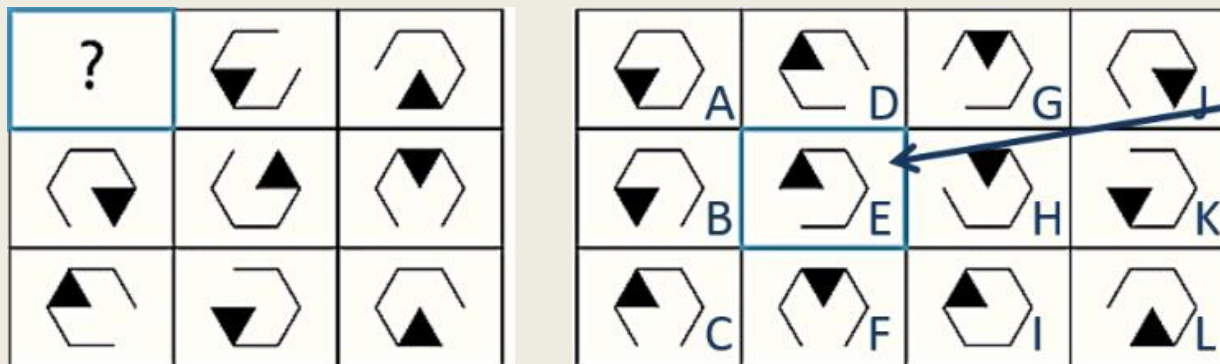


Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Logical Reasoning - ANSWER

1<sup>st</sup> Rule: From top to bottom, the missing edge of the hexagon moves one place counter clockwise each time. This pattern continues onto the next column.

2<sup>nd</sup> Rule: From left to right, the shaded segment of the hexagon moves one place counter clockwise each time. This pattern continues onto the next row.



Answer: **E**

Source: [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Preparing for Non-Verbal Reasoning Tests

- Research the type of test you may have to take
  - Try an appropriate practice test
    - If you find it difficult, look at the answers and tips
      - Take a practice test again
        - Have you improved?

# Preparing for tests – Research

- Look at employers' websites to see the type of tests they use, e.g. logical reasoning, diagrammatic reasoning etc.
- The website may also have example questions and tell you whose tests they use.
- Look at websites like Glassdoor or Wikijobs for feedback from others who have already applied to the same employer.



# Preparing for tests – Practise

- When you know the type of test you may face, get some practice first, e.g. try the tests on the Assessment Day or Graduates First websites.
- If you know which test producer the employer uses, see if there are example questions on the producer's website. Many of these are listed later in this presentation.

# Preparing for tests – Improve

**Q:** *Not answering many questions but getting most or all answers correct?*

**A:** Take more practice tests and focus on increasing your speed.

**Q:** *Answering most or all of the questions but getting a low score?*

**A:** Work on your accuracy e.g. check your answers

**Q:** *Lacking knowledge/skills?*

**A:** Look for resources that explain non-verbal reasoning tests and include practice questions (with answers). Some suggestions are on the slide 'Other Useful Resources'.

# Preparing for tests – Try again

- When you have practised your speed, improved accuracy or developed your knowledge of non-verbal reasoning tests, try a test again.
- With some tests, it is not always necessary to answer all of the questions to do well. You just need to get enough answers correct.

# General Practice Test Sites

[www.assessmentday.co.uk](http://www.assessmentday.co.uk)

[www.graduatesfirst.com](http://www.graduatesfirst.com)

- Answers are provided after taking each test, so you can analyse where you are going wrong.
- Tips and advice are also provided.
- Both sites include practice tests of non-verbal reasoning

# Non-Verbal Reasoning Tests: practice tests

- [https://www.assessmentday.co.uk/inductive\\_reasoning.htm](https://www.assessmentday.co.uk/inductive_reasoning.htm)
- [https://www.assessmentday.co.uk/aptitudetests\\_logical.htm](https://www.assessmentday.co.uk/aptitudetests_logical.htm)
- [https://www.assessmentday.co.uk/aptitudetests\\_diagrammatic.htm](https://www.assessmentday.co.uk/aptitudetests_diagrammatic.htm)

These links are to free practice tests at [www.assessmentday.co.uk](http://www.assessmentday.co.uk)

# Practice Tests Offered by Test Producers

CEB Gartner (SHL)

<https://www.cebglobal.com/shldirect/en/practice-tests>

Cubiks

<https://practicetests.cubiks.com/>

Talentlens (Pearson)

<https://www.talentlens.co.uk/practice-aptitude>

Saville Assessment

<https://www.savilleassessment.com/PracticeTests>

TalentQ

<https://www.trytalentq.com/>

Capp

<http://practice.cappassessments.com/>

You may have to  
register & create a  
password before  
taking a practice  
test

# Sources of Support in Your University

Your careers service might offer:

- Information about taking tests on their websites
- Opportunities to practise tests and receive feedback
- Discussion with an adviser to address your concerns
- Links to websites with practice tests

# Other Useful Resources

- Online courses e.g.

<https://www.futurelearn.com/courses/logical-and-critical-thinking>

- Books e.g.

‘How to Pass Graduate Psychometric Tests’ M Byron

‘How to Pass Diagrammatic Reasoning Tests’ M Byron

‘Inductive Reasoning Tests’ M Shepherd

‘Succeed at Psychometric Testing: practice tests for diagrammatic and abstract reasoning’ P Rhodes



Thank you

Any questions ???