Diagrammatic reasoning tests are closely related to abstract reasoning tests. They are used to select information technology specialists who need to work through complex abstract problems in an analytical way. The questions consist of flowcharts or process diagrams, and measure your ability to follow a series of logical instructions or to infer rules presented using symbols.

These types of questions can appear in other types of test but they are particularly suited to information technology jobs because they closely mirror the way in which analysts and programmers approach software design. As such, they could be thought of as a work sample test that is independent of any particular technology or programming language.

This diagram shows ‘inputs’ and ‘outputs’ in the large boxes. The ‘operators’ or ‘processes’ are shown in the small boxes. To answer this type of question, you need to determine what effect each of the ‘operators’ or ‘processes’ is having on the ‘input’ in order to produce the ‘output’ shown.

In other questions the operators may be pre-defined as in the diagram below. Each operator acts on a figure that it is attached to. The figure is shown in the square box, the operator is shown in the round-cornered box. The sequence of operations is always from top to bottom.
This means that you need to work from top to bottom, making a note of the effect of each operator at each stage. Remember some of the operations involve changing the relative position of figures. Therefore, subsequent operations may need to be applied to the ‘new’ figure—not to the one shown.

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<tr>
<th>Operators</th>
<th>Example</th>
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<tbody>
<tr>
<td><img src="image" alt="Swap with top box" /></td>
<td><img src="image" alt="Reverse colors" /> e.g. <img src="image" alt="Image" /> = <img src="image" alt="Image" /></td>
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Test 1—35 Questions
Answer as many questions as you can in 20 minutes. Circle the letter at the bottom of the page which corresponds to the correct answer.

1) [Diagram]

2) [Diagram]

3) [Diagram]

4) [Diagram]

5) [Diagram]

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11) A B C D

12) A B C D

13) A B C D

14) A B C D

15) A B C D

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Diagrammatic reasoning—Practice test 1

16) \[
\begin{array}{c}
\text{A} \\
\text{B} \\
\text{C} \\
\text{D}
\end{array}
\quad \rightarrow \quad \begin{array}{c}
\times \\
\rightarrow \\
\quad \text{?}
\end{array}
\quad \begin{array}{c}
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\text{B} \\
\text{C} \\
\text{D}
\end{array}
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17) \[
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\end{array}
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\rightarrow \\
\quad \text{?}
\end{array}
\quad \begin{array}{c}
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\text{B} \\
\text{C} \\
\text{D}
\end{array}
\]

18) \[
\begin{array}{c}
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\text{B} \\
\text{C} \\
\text{D}
\end{array}
\quad \rightarrow \quad \begin{array}{c}
\text{□} \\
\rightarrow \\
\quad \text{?}
\end{array}
\quad \begin{array}{c}
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\text{B} \\
\text{C} \\
\text{D}
\end{array}
\]

19) \[
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\text{C} \\
\text{D}
\end{array}
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\rightarrow \\
\quad \times \\
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20) \[
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\end{array}
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Diagrammatic reasoning—Practice test 1

21) ABC → △ → ?

22) ABC → ◯ → ?

23) ABC → ● → ?

24) ABC → □ → △ → ?

25) ABC → ● → ◯ → ?

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Diagrammatic reasoning—Practice test 1

26) $\overrightarrow{ABC} \rightarrow \overrightarrow{\times} \rightarrow ?$

27) $\overrightarrow{ABC} \rightarrow \overrightarrow{\blacklozenge} \rightarrow ?$

28) $\overrightarrow{ABC} \rightarrow \overrightarrow{\lozenge} \rightarrow ?$

29) $\overrightarrow{ABC} \rightarrow \overrightarrow{\bigcirc} \rightarrow \overrightarrow{\times} \rightarrow ?$

30) $\overrightarrow{ABC} \rightarrow \overrightarrow{\blacklozenge} \rightarrow \overrightarrow{\bullet} \rightarrow ?$

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31)  

![Diagram 31](image1)

A   B   C   D  E

32)  

![Diagram 32](image2)

A   B   C   D  E

33)  

![Diagram 33](image3)

A   B   C   D  E

34)  

![Diagram 34](image4)

A   B   C   D  E

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<td>A B C D E</td>
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Diagrammatic reasoning—Practice test 1

35)

Operators

- Swap with top box
- Copy to bottom box
- Swap with box above
- Copy to box below

- ( ) Reverse colors  e.g.  ■ ( ) = ■
- ( ) Set colors to white  e.g.  ■ ( ) = ■
- ( ) Set colors to black  e.g.  ■ ( ) = ■

A   B   C   D  E

End of Diagrammatic Reasoning—Test 1
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## Answers

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