4.7 Cube Nets: 30-minute Pack

GL ASSESSMENT GL-EP.N9 · Calculators not allowed · about 30 minutes

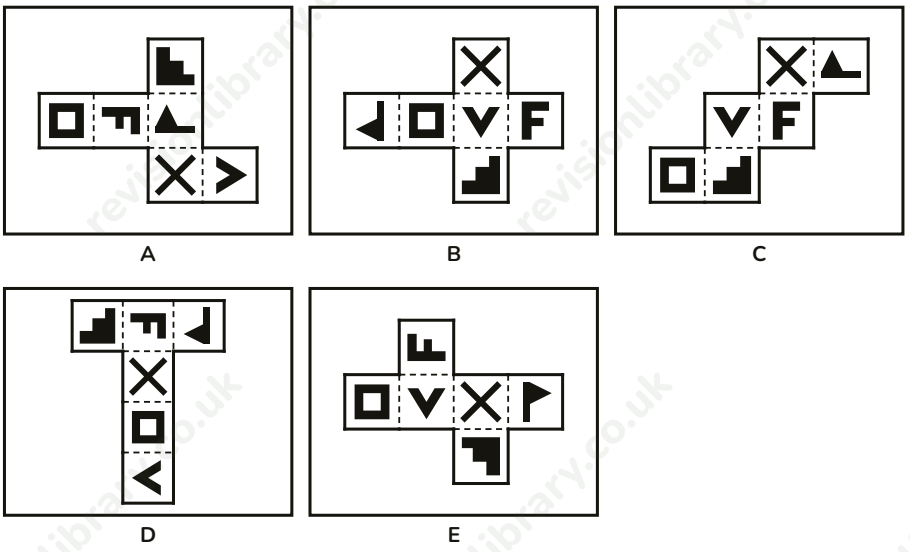
Total Marks

Name: _____ Date: ____ / ____ / _____

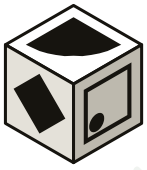
Answer ALL questions. Show all your working.

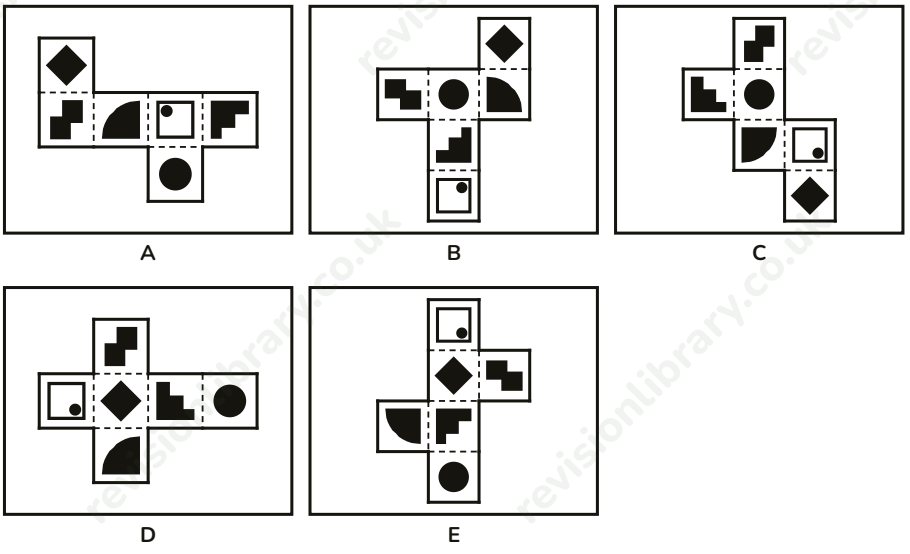
1 The cube in the diagram shows three of its faces, with the symbols on the outside. Which net, A to E, folds along the dotted lines to make this cube?





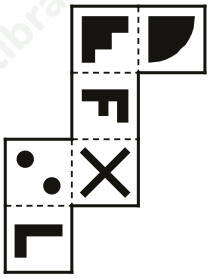
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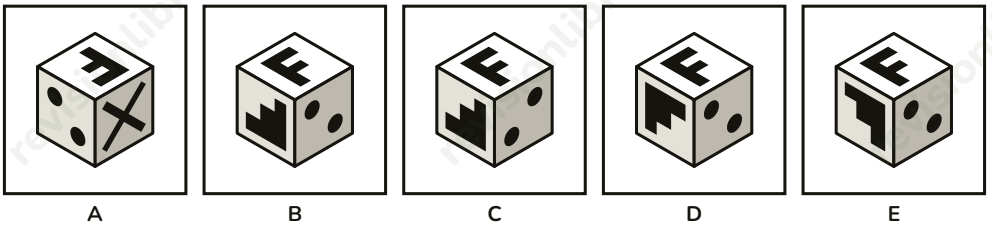




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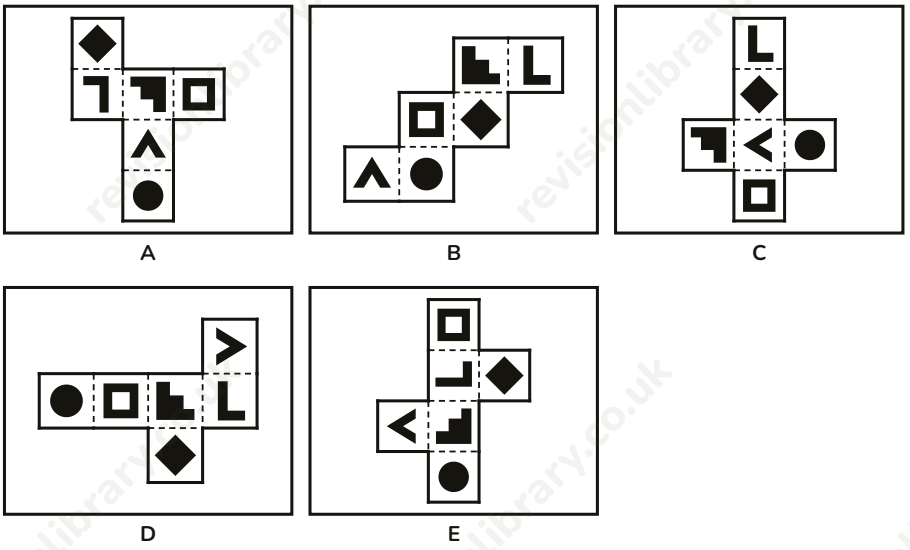
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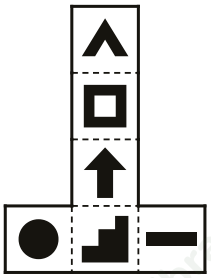


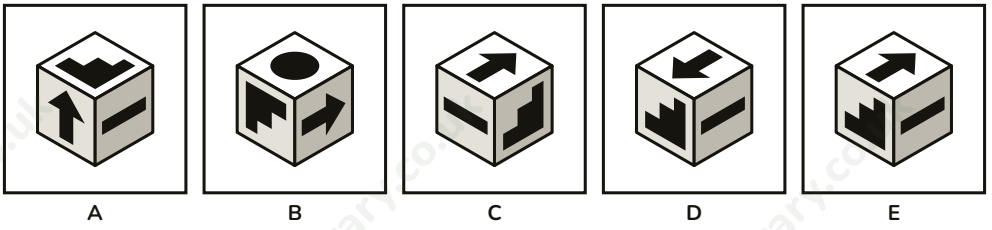
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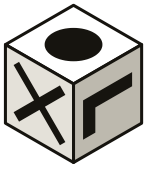
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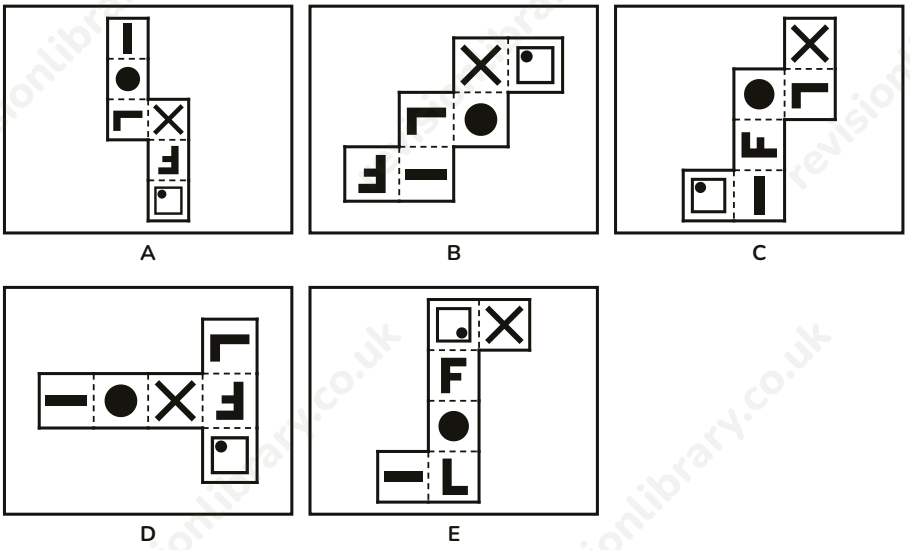




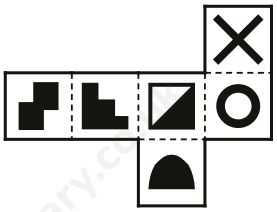
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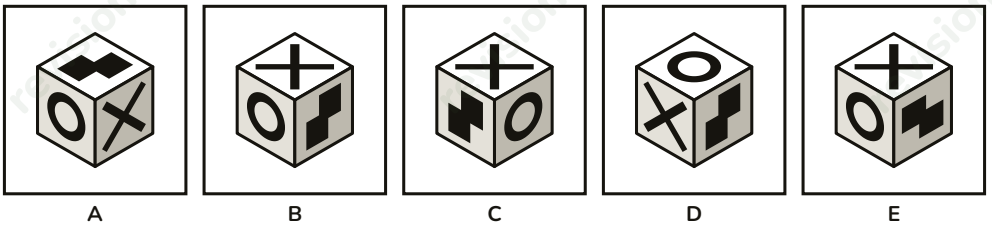
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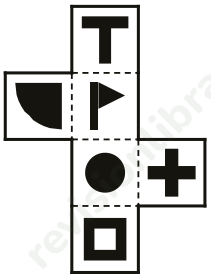


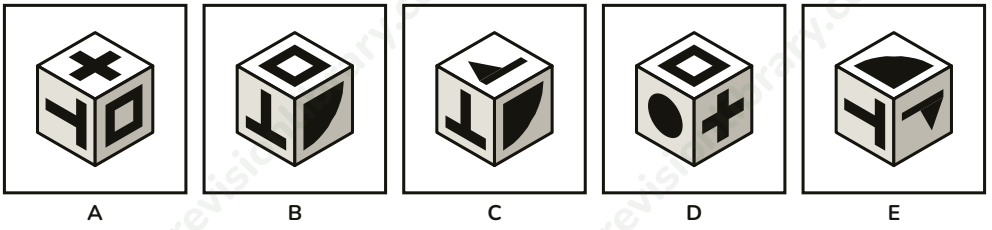
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8

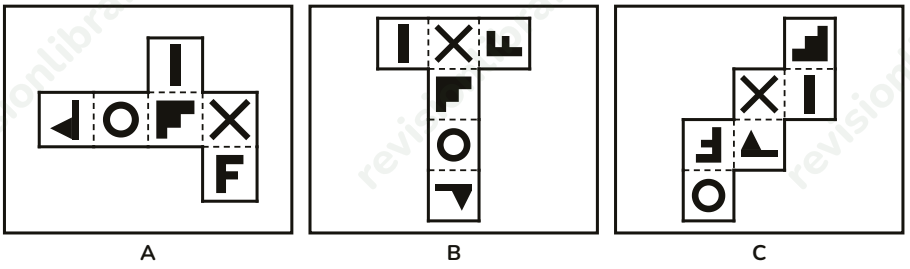




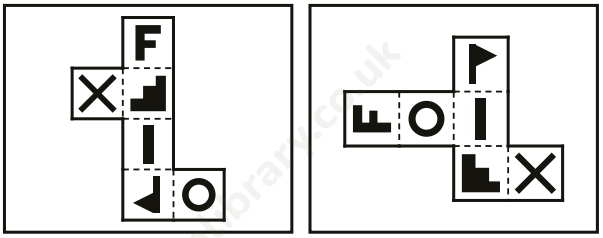
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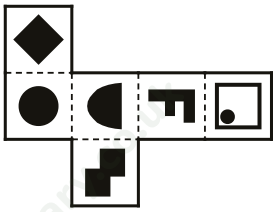


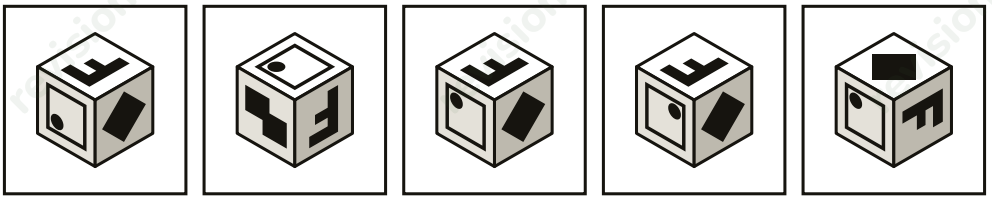
A B C



D E

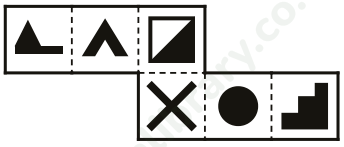
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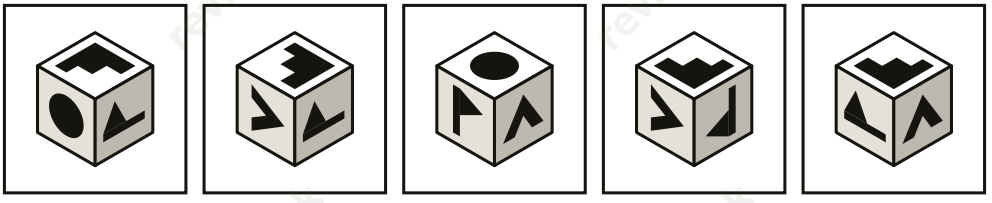




A B C D E

11



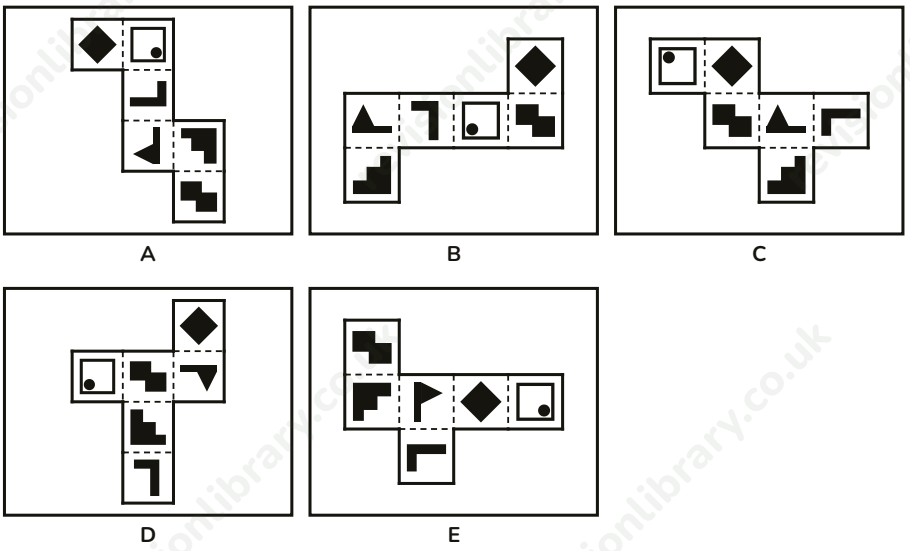


A B C D E

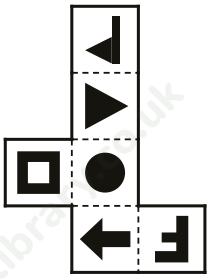
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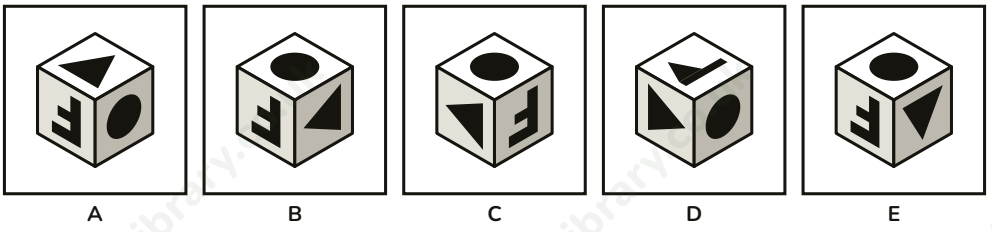
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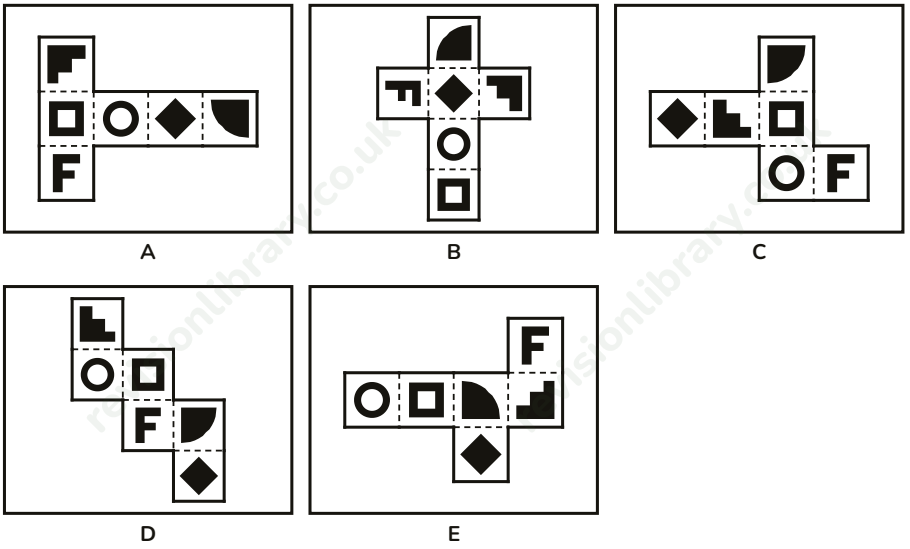
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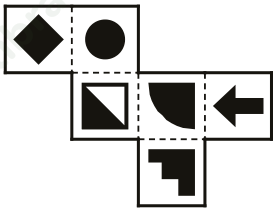
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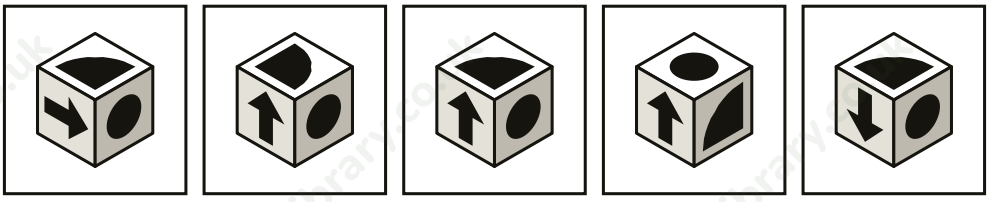




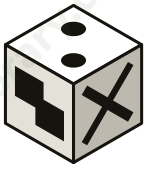
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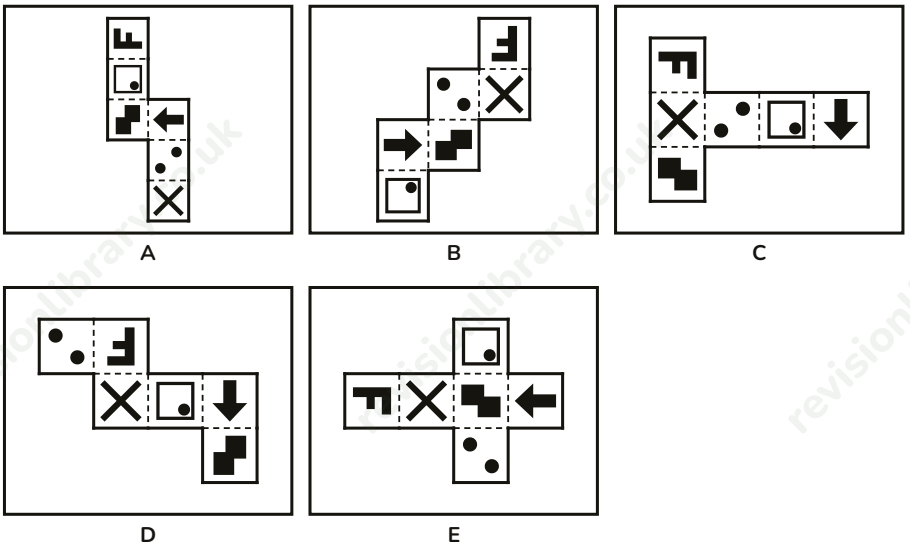
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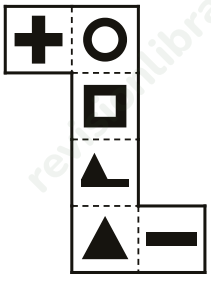


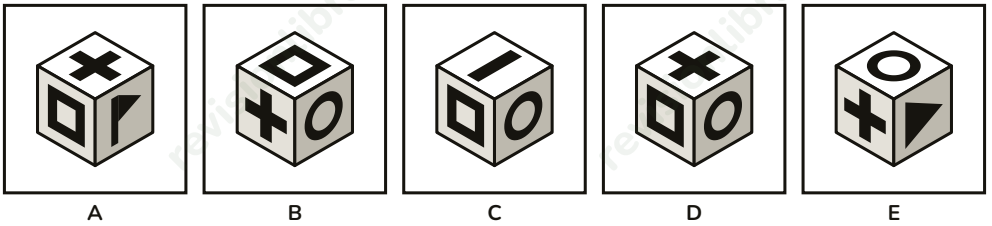
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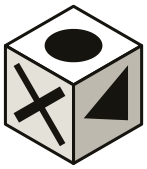
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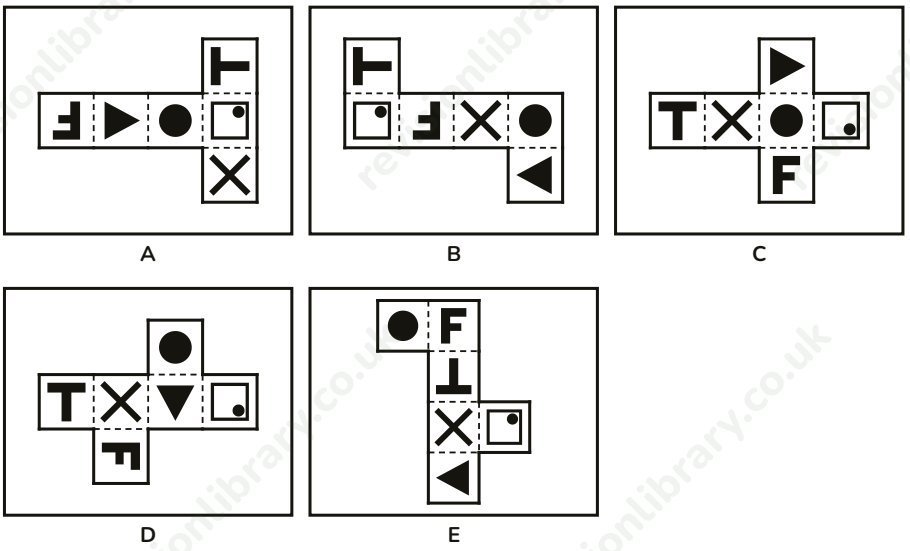




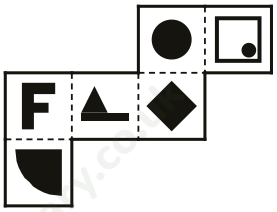
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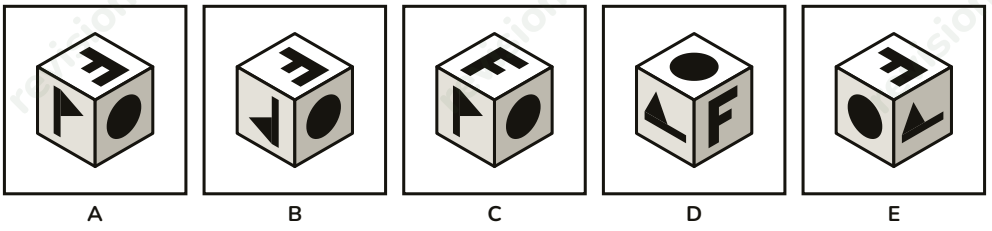
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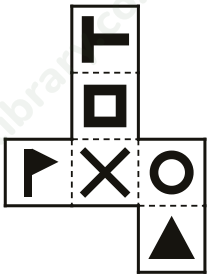
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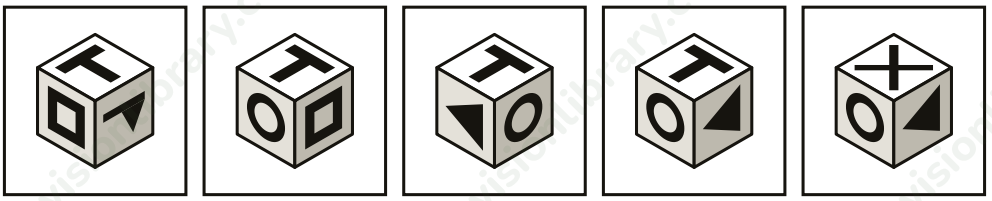




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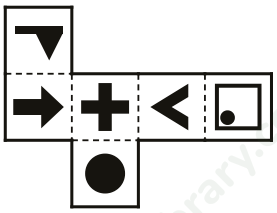
20





A B C D E

21





A B C D E

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Mark scheme · 4.7 Cube Nets: 30-minute Pack

Question 1

Option C is correct: it folds to a cube with a flag on a pole (turned upside down) on the top, a diagonal cross on the left, a capital F (turned a quarter turn anticlockwise) on the right. Option E is wrong: when folded, a diagonal cross and a capital F have swapped places. Option D is wrong: when folded, a flag on a pole and a diagonal cross have swapped places. Option B is wrong: when folded, the a flag on a pole has been turned the wrong way. Option A is wrong: when folded, a flag on a pole and a capital F have swapped places. **B1**

Answer: C) Net of six squares. Row 1 (from the top): column 3: a diagonal cross, then column 4: a flag on a pole (turned a quarter turn anticlockwise). Row 2 (from the top): column 2: a chevron (upright), then column 3: a capital F (upright). Row 3 (from the top): column 1: a square frame, then column 2: a staircase (upright).

Question 2

Option C is correct: it folds to a cube with a quarter disc (turned a quarter turn clockwise) on the top, a diamond on the left, a square with a dot in one corner (turned a quarter turn anticlockwise) on the right. Option E is wrong: when folded, the a quarter disc has been turned the wrong way. Option D is wrong: when folded, the a square with a dot in one corner has been turned the wrong way. Option A is wrong: when folded, a quarter disc and a square with a dot in one corner have swapped places. Option B is wrong: when folded, a diamond and a square with a dot in one corner have swapped places. **B1**

Answer: C) Net of six squares. Row 1 (from the top): column 2: a skew block shape (two offset bars) (turned a quarter turn). Row 2 (from the top): column 1: a staircase (turned a quarter turn clockwise), then column 2: a solid circle. Row 3 (from the top): column 2: a quarter disc (turned a quarter turn clockwise), then column 3: a square with a dot in one corner (turned upside down). Row 4 (from the top): column 3: a diamond.

Question 3

Option B is correct: Isometric corner view of a cube showing three faces. TOP face: a capital F (turned a quarter turn anticlockwise). LEFT face: a staircase (upright). RIGHT face: two dots on a diagonal (upright). This is what the net folds to when it is turned to show these three faces. Option C is wrong: the two dots on a diagonal has been turned the wrong way. Option A is wrong: the a capital F has been turned the wrong way. Option D is wrong: the a staircase has been turned the wrong way. Option E is wrong: the a staircase has been turned the wrong way. **B1**

Answer: B) Isometric corner view of a cube showing three faces. TOP face: a capital F (turned a quarter turn anticlockwise). LEFT face: a staircase (upright). RIGHT face: two dots on a diagonal (upright).

Question 4

Option D is correct: it folds to a cube with a square frame on the top, a chevron (turned a quarter turn anticlockwise) on the left, a solid circle on the right. Option C is wrong: when folded, a square frame and a chevron have swapped places. Option A is wrong: when folded, the a chevron has been turned the wrong way. Option E is wrong: when folded, a square frame and a solid circle have swapped places. Option B is wrong: when folded, the a chevron has been turned the wrong way. **B1**

Answer: D) Net of six squares. Row 1 (from the top): column 4: a chevron (turned a quarter turn anticlockwise). Row 2 (from the top): column 1: a solid circle, then column 2: a square frame, then column 3: a staircase (turned a quarter turn clockwise), then column 4: an L shape with a long upright stroke and a short foot (upright). Row 3 (from the top): column 3: a diamond.

Question 5

Option E is correct: Isometric corner view of a cube showing three faces. TOP face: an arrow (upright). LEFT face: a staircase (upright). RIGHT face: a thick bar (upright). This is what the net folds to when it is turned to show these three faces. Option A is wrong: an arrow and a staircase have swapped places. Option B is wrong: the a staircase has been turned the wrong way. Option C is wrong: a staircase and a thick bar have swapped places. Option D is wrong: the an arrow has been turned the wrong way. **B1**

Answer: E) Isometric corner view of a cube showing three faces. TOP face: an arrow (upright). LEFT face: a staircase (upright). RIGHT face: a thick bar (upright).

Question 6

Option D is correct: it folds to a cube with a solid circle on the top, a diagonal cross on the left, an L shape with a long upright stroke and a short foot (turned a quarter turn clockwise) on the right. Option A is wrong: when folded, a diagonal cross and an L shape with a long upright stroke and a short foot have swapped places. Option B is wrong: when folded, the an L shape with a long upright stroke and a short foot has been turned the wrong way. Option E is wrong: when folded, a solid circle and an L shape with a long upright stroke and a short foot have swapped places. Option C is wrong: when folded, a solid circle and a diagonal cross have swapped places. **B1**

Answer: D) Net of six squares. Row 1 (from the top): column 4: an L shape with a long upright stroke and a short foot (turned a quarter turn clockwise). Row 2 (from the top): column 1: a thick bar (upright), then column 2: a solid circle, then column 3: a diagonal cross, then column 4: a capital F (turned upside down). Row 3 (from the top): column 4: a square with a dot in one corner (upright).

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Question 7

Option B is correct: Isometric corner view of a cube showing three faces. TOP face: a diagonal cross. LEFT face: a ring. RIGHT face: a skew block shape (two offset bars) (turned a quarter turn). This is what the net folds to when it is turned to show these three faces. Option C is wrong: a ring and a skew block shape (two offset bars) have swapped places. Option A is wrong: a diagonal cross and a skew block shape (two offset bars) have swapped places. Option E is wrong: the a skew block shape (two offset bars) has been turned the wrong way. Option D is wrong: a diagonal cross and a ring have swapped places. **B1**

Answer: B) Isometric corner view of a cube showing three faces. TOP face: a diagonal cross. LEFT face: a ring. RIGHT face: a skew block shape (two offset bars) (turned a quarter turn).

Question 8

Option C is correct: Isometric corner view of a cube showing three faces. TOP face: a flag on a pole (turned upside down). LEFT face: a letter T (turned upside down). RIGHT face: a quarter disc (turned a quarter turn clockwise). This is what the net folds to when it is turned to show these three faces. Option E is wrong: a flag on a pole and a letter T have swapped places. Option D is wrong: a solid circle appears where a letter T should be: they are on opposite faces, so they can never meet at a corner. Option B is wrong: a square frame appears where a flag on a pole should be: they are on opposite faces, so they can never meet at a corner. Option A is wrong: a plus sign appears where a quarter disc should be: they are on opposite faces, so they can never meet at a corner. **B1**

Answer: C) Isometric corner view of a cube showing three faces. TOP face: a flag on a pole (turned upside down). LEFT face: a letter T (turned upside down). RIGHT face: a quarter disc (turned a quarter turn clockwise).

Question 9

Option A is correct: it folds to a cube with a staircase (turned upside down) on the top, a capital F (turned a quarter turn clockwise) on the left, a diagonal cross on the right. Option E is wrong: when folded, the a staircase has been turned the wrong way. Option D is wrong: when folded, the a capital F has been turned the wrong way. Option B is wrong: when folded, the a staircase has been turned the wrong way. Option C is wrong: when folded, the a capital F has been turned the wrong way. **B1**

Answer: A) Net of six squares. Row 1 (from the top): column 3: a thick bar (turned a quarter turn). Row 2 (from the top): column 1: a flag on a pole (turned upside down), then column 2: a ring, then column 3: a staircase (turned upside down), then column 4: a diagonal cross. Row 3 (from the top): column 4: a capital F (upright).

Question 10

Option C is correct: Isometric corner view of a cube showing three faces. TOP face: a capital F (turned upside down). LEFT face: a square with a dot in one corner (upright). RIGHT face: a diamond. This is what the net folds to when it is turned to show these three faces. Option E is wrong: a capital F and a diamond have swapped places. Option B is wrong: a capital F and a square with a dot in one corner have swapped places. Option A is wrong: the a square with a dot in one corner has been turned the wrong way. Option D is wrong: the a square with a dot in one corner has been turned the wrong way. **B1**

Answer: C) Isometric corner view of a cube showing three faces. TOP face: a capital F (turned upside down). LEFT face: a square with a dot in one corner (upright). RIGHT face: a diamond.

Question 11

Option E is correct: Isometric corner view of a cube showing three faces. TOP face: a staircase (upright). LEFT face: a flag on a pole (turned a quarter turn anticlockwise). RIGHT face: a chevron (turned upside down). This is what the net folds to when it is turned to show these three faces. Option A is wrong: the a staircase has been turned the wrong way. Option D is wrong: a flag on a pole and a chevron have swapped places. Option B is wrong: a staircase and a flag on a pole have swapped places. Option C is wrong: a staircase and a chevron have swapped places. **B1**

Answer: E) Isometric corner view of a cube showing three faces. TOP face: a staircase (upright). LEFT face: a flag on a pole (turned a quarter turn anticlockwise). RIGHT face: a chevron (turned upside down).

Question 12

Option A is correct: it folds to a cube with an L shape with a long upright stroke and a short foot (turned a quarter turn anticlockwise) on the top, a flag on a pole (turned upside down) on the left, a staircase (turned a quarter turn anticlockwise) on the right. Option C is wrong: when folded, the an L shape with a long upright stroke and a short foot has been turned the wrong way. Option B is wrong: when folded, the an L shape with a long upright stroke and a short foot has been turned the wrong way. Option D is wrong: when folded, the a flag on a pole has been turned the wrong way. Option E is wrong: when folded, the a staircase has been turned the wrong way. **B1**

Answer: A) Net of six squares. Row 1 (from the top): column 1: a diamond, then column 2: a square with a dot in one corner (turned upside down). Row 2 (from the top): column 2: an L shape with a long upright stroke and a short foot (turned a quarter turn anticlockwise). Row 3 (from the top): column 2: a flag on a pole (turned upside down), then column 3: a staircase (turned a quarter turn anticlockwise). Row 4 (from the top): column 3: a skew block shape (two offset bars) (upright).

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Question 13

Option B is correct: Isometric corner view of a cube showing three faces. TOP face: a solid circle. LEFT face: a capital F (turned upside down). RIGHT face: a triangle (turned a quarter turn anticlockwise). This is what the net folds to when it is turned to show these three faces. Option E is wrong: the a triangle has been turned the wrong way. Option A is wrong: a solid circle and a triangle have swapped places. Option C is wrong: a capital F and a triangle have swapped places. Option D is wrong: a solid circle and a capital F have swapped places. **B1**

Answer: B) Isometric corner view of a cube showing three faces. TOP face: a solid circle. LEFT face: a capital F (turned upside down). RIGHT face: a triangle (turned a quarter turn anticlockwise).

Question 14

Option A is correct: it folds to a cube with a diamond on the top, a staircase (turned upside down) on the left, a ring on the right. Option C is wrong: when folded, a quarter disc appears where a ring should be: they are on opposite faces, so they can never meet at a corner. Option E is wrong: when folded, a diamond and a staircase have swapped places. Option B is wrong: when folded, a square frame appears where a diamond should be: they are on opposite faces, so they can never meet at a corner. Option D is wrong: when folded, a capital F appears where a staircase should be: they are on opposite faces, so they can never meet at a corner. **B1**

Answer: A) Net of six squares. Row 1 (from the top): column 1: a staircase (turned upside down). Row 2 (from the top): column 1: a square frame, then column 2: a ring, then column 3: a diamond, then column 4: a quarter disc (turned upside down). Row 3 (from the top): column 1: a capital F (upright).

Question 15

Option C is correct: Isometric corner view of a cube showing three faces. TOP face: a quarter disc (turned a quarter turn anticlockwise). LEFT face: an arrow (upright). RIGHT face: a solid circle. This is what the net folds to when it is turned to show these three faces. Option B is wrong: the a quarter disc has been turned the wrong way. Option A is wrong: the an arrow has been turned the wrong way. Option D is wrong: a quarter disc and a solid circle have swapped places. Option E is wrong: the an arrow has been turned the wrong way. **B1**

Answer: C) Isometric corner view of a cube showing three faces. TOP face: a quarter disc (turned a quarter turn anticlockwise). LEFT face: an arrow (upright). RIGHT face: a solid circle.

Question 16

Option E is correct: it folds to a cube with two dots on a diagonal (upright) on the top, a skew block shape (two offset bars) (upright) on the left, a diagonal cross on the right. Option D is wrong: when folded, the two dots on a diagonal has been turned the wrong way. Option C is wrong: when folded, two dots on a diagonal and a diagonal cross have swapped places. Option A is wrong: when folded, the a skew block shape (two offset bars) has been turned the wrong way. Option B is wrong: when folded, the a skew block shape (two offset bars) is shown as a mirror image. **B1**

Answer: E) Net of six squares. Row 1 (from the top): column 3: a square with a dot in one corner (turned upside down). Row 2 (from the top): column 1: a capital F (turned a quarter turn clockwise), then column 2: a diagonal cross, then column 3: a skew block shape (two offset bars) (upright), then column 4: an arrow (turned a quarter turn anticlockwise). Row 3 (from the top): column 3: two dots on a diagonal (upright).

Question 17

Option D is correct: Isometric corner view of a cube showing three faces. TOP face: a plus sign. LEFT face: a square frame. RIGHT face: a ring. This is what the net folds to when it is turned to show these three faces. Option E is wrong: a plus sign and a ring have swapped places. Option C is wrong: a thick bar appears where a plus sign should be: they are on opposite faces, so they can never meet at a corner. Option B is wrong: a triangle appears where a square frame should be: they are on opposite faces, so they can never meet at a corner. Option A is wrong: a flag on a pole appears where a ring should be: they are on opposite faces, so they can never meet at a corner. **B1**

Answer: D) Isometric corner view of a cube showing three faces. TOP face: a plus sign. LEFT face: a square frame. RIGHT face: a ring.

Question 18

Option B is correct: it folds to a cube with a solid circle on the top, a diagonal cross on the left, a triangle (turned a quarter turn anticlockwise) on the right. Option D is wrong: when folded, the a triangle has been turned the wrong way. Option C is wrong: when folded, a solid circle and a triangle have swapped places. Option E is wrong: when folded, a solid circle and a diagonal cross have swapped places. Option A is wrong: when folded, a diagonal cross and a triangle have swapped places. **B1**

Answer: B) Net of six squares. Row 1 (from the top): column 1: a letter T (turned a quarter turn anticlockwise). Row 2 (from the top): column 1: a square with a dot in one corner (turned a quarter turn clockwise), then column 2: a capital F (turned upside down), then column 3: a diagonal cross, then column 4: a solid circle. Row 3 (from the top): column 4: a triangle (turned a quarter turn anticlockwise).

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Question 19

Option A is correct: Isometric corner view of a cube showing three faces. TOP face: a capital F (turned a quarter turn clockwise). LEFT face: a flag on a pole (upright). RIGHT face: a solid circle. This is what the net folds to when it is turned to show these three faces. Option B is wrong: the a flag on a pole has been turned the wrong way. Option C is wrong: the a capital F has been turned the wrong way. Option D is wrong: a capital F and a flag on a pole have swapped places. Option E is wrong: a flag on a pole and a solid circle have swapped places. **B1**

Answer: A) Isometric corner view of a cube showing three faces. TOP face: a capital F (turned a quarter turn clockwise). LEFT face: a flag on a pole (upright). RIGHT face: a solid circle.

Question 20

Option D is correct: Isometric corner view of a cube showing three faces. TOP face: a letter T (upright). LEFT face: a ring. RIGHT face: a triangle (turned a quarter turn anticlockwise). This is what the net folds to when it is turned to show these three faces. Option A is wrong: a flag on a pole appears where a ring should be: they are on opposite faces, so they can never meet at a corner. Option B is wrong: a square frame appears where a triangle should be: they are on opposite faces, so they can never meet at a corner. Option C is wrong: a ring and a triangle have swapped places. Option E is wrong: a diagonal cross appears where a letter T should be: they are on opposite faces, so they can never meet at a corner. **B1**

Answer: D) Isometric corner view of a cube showing three faces. TOP face: a letter T (upright). LEFT face: a ring. RIGHT face: a triangle (turned a quarter turn anticlockwise).

Question 21

Option B is correct: Isometric corner view of a cube showing three faces. TOP face: a chevron (turned a quarter turn clockwise). LEFT face: a solid circle. RIGHT face: a square with a dot in one corner (upright). This is what the net folds to when it is turned to show these three faces. Option A is wrong: a chevron and a square with a dot in one corner have swapped places. Option C is wrong: a chevron and a solid circle have swapped places. Option D is wrong: a solid circle and a square with a dot in one corner have swapped places. Option E is wrong: the a square with a dot in one corner has been turned the wrong way. **B1**

Answer: B) Isometric corner view of a cube showing three faces. TOP face: a chevron (turned a quarter turn clockwise). LEFT face: a solid circle. RIGHT face: a square with a dot in one corner (upright).

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