Non-Verbal Reasoning Mock Test 12 Answers

Q#	Answer	Explanation
1	C	The trapezium is turned an eighth of a turn **clockwise**, so its long bottom side now slopes down to the right. The arrow points right, so an eighth of a turn clockwise makes it point **down and to the right**: C. A has been turned the other way and points up to the right, B has turned a quarter turn and points straight down, D has turned too far and points down to the left, and E points left.
2	A	Only the **top** circle changes: it is filled in black, while the square and the bottom circle stay as they were. So the triangle at the top of the hexagon must turn black and the square below it stay white: A. B has blackened the bottom shape instead, C has blackened both, D has made the triangle grey, and E has taken it away.
3	D	Two things happen: the triangle is turned a quarter turn **clockwise**, **and** it is shaded **light grey**. The semicircle's curved edge faces up, so a quarter turn clockwise makes it face **right**, and it must be light grey: D. A faces right but is still white, B is light grey but still faces up, C faces left, and E faces right but is dark grey, not light.
4	B	The triangle slides from the top left corner of the square to the **bottom right**, and it still points up - it has moved, not turned. So the arrow must slide from the top left of the circle to the bottom right and still point **right**: B. A has it in the right place but pointing left, which is the whole picture turned upside down. C has moved it only across to the top right, D only down to the bottom left, and E has it at the top right pointing left.
5	E	Only the dot on the **left** grows; the dot on the right and the rectangle stay as they were. So the square on the left must grow and stay black, while the star stays small and black: E. A has grown the star instead, B has grown the square but turned the star white, C has turned the square white without growing it, and D has grown it but turned it grey.

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6	C	Two things happen: the circle is taken away, **and** the star moves into the middle of the pentagon. So the cross must go and the triangle move into the **middle** of the square: C. A keeps the wrong one - the cross is in the middle and the triangle has gone. B has taken the cross away but left the triangle in its corner, D has moved the triangle but kept the cross, and E has moved the triangle to where the cross was.
7	A	Two things happen: the triangle is given a **half turn**, so it points down and its dot is carried from the bottom left to the top right, **and** the dot turns white. Do the same to the trapezium: it ends with its long side at the top, and the square is carried from the bottom left to the **top right** and turns white: A. B is turned but the square is still black, and C has a white square but has not turned. D is upside down with a white square, but the square is still on the left, so it has been flipped, not turned; E has only moved the square across to the right.
8	D	Two things happen: the circle is shaded **grey**, **and** its two marks swap colours - the black square turns white and the white triangle turns black - without moving. So the hexagon must turn grey, its cross turn black and its dot turn white: D. A has swapped the colours but left the hexagon white, B has shaded the hexagon but not swapped the colours, C has made both marks black, and E has swapped the colours but dotted the hexagon instead of shading it grey.
9	B	A quarter turn anticlockwise lays the G on its back: its long upright side now lies along the **bottom**, it opens at the top, and the arm that ends in a little hook - the bottom arm at the start - is now on the **right**, with the hook turned in: B. D also lies on its back but has the hook on the left arm, which makes it a mirror image. A is a back-to-front G, C an upside-down one, and E lies with its back along the top.

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10	D	A quarter turn clockwise lays the kite on its side and carries the dot round with it. The dot starts to the **right** of the kite's long middle line and a little above its widest part; after the turn it is **below** that line and to the right of the widest part: D. C and E also lie on their sides, but in C the dot is above the line and in E it is to the left - both are mirror images. A and B still stand upright, flipped over.
11	A	The piece is an upright of three squares with one square sticking out to the **left** from the middle and one to the **right** from the top. A half turn swaps both: now one sticks out to the **right** from the middle and one to the **left** from the bottom: A. B has the middle one on the right but the other at the top, and C has the other at the bottom but the middle one still on the left - both are mirror images. D and E lie on their sides.
12	E	A quarter turn anticlockwise turns the curved edge to face **left** and carries the shaded half, which was on the left, down to the **bottom**: E. D also faces left, but its top half is shaded, and C has the bottom half shaded but faces right; both are mirror images. A still faces up, shaded on the right, and B faces down.
13	C	Follow both pieces. A quarter turn clockwise carries the triangle from the lower left up to the **top**, and the circle from the upper right down to the **bottom**; the triangle's square corner, which was at its bottom left, ends at its **top left**: C. E also has the triangle at the top and the circle at the bottom, but its square corner is at the top right and the circle is on the left - a mirror image. A, B and D are mirror images too.
14	D	A third of a turn is hard to picture, so turn each option back until the rectangle lies flat. At the start the star and the dot sit on the diagonal running from the **top left** to the **bottom right**. Only D comes back like that, whichever way up you hold it. A, B, C and E are mirror images: turned flat, their star and dot lie on the other diagonal, from the top right to the bottom left.

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15	B	Turn each option back until the triangle's **longest** side lies flat along the bottom. At the start its top corner leans over to the **right** of the middle, and the white dot sits towards the left-hand corner, away from it. Only B comes back with its top corner leaning to the right; the four mirror images all come back leaning to the left.
16	E	Turn each option back until the bar of **three** squares lies flat at the bottom. At the start the bar of two sits on top of it, joined by one square, with its spare square sticking out to the **left**. Only E comes back like that; the four mirror images come back with it sticking out to the right.
17	D	The shadings, the sizes and the marks inside all change, but four of the outside shapes are **hexagons**, with six sides. D is a pentagon, with only five.
18	E	Every picture has two parts. In four of them one part is **black** and the other is **striped** - inside or outside, left or right, whichever way the stripes run. E has a black circle, but its kite is dotted, not striped.
19	B	Every picture has three parts, and in four of them all three are **triangles** - any kind of triangle, turned any way, in a row or one inside another. B has a kite in the middle, which has four sides.
20	C	Four of the shapes are the same shape turned different ways: a **kite**, whose four corners all point outwards. C has four sides too, but one of its corners is pushed **in**: it is an arrowhead.
21	D	Count the **black** parts. Four pictures have exactly three, whether they sit inside a white shape or stand in a row. D has only two: its circle is grey.
22	A	Add up the sides in each picture. A hexagon and two squares make 6 + 4 + 4 = 14, two heptagons make 7 + 7 = 14, a pentagon, a triangle and a hexagon make 5 + 3 + 6 = 14, and a square, a triangle and a heptagon make 4 + 3 + 7 = 14. A, a heptagon holding a hexagon, makes only 7 + 6 = 13.

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23	E	Every picture has four parts. In four of them exactly **three** are shaded - black, grey, light grey, dotted and striped all count - and one is left white. In E all four are shaded: the pentagon is grey and all three of its marks are black.
24	B	Two things are true of four of the pictures: exactly **one** part has a dashed outline, and exactly **one** part is black. B has its dashed pentagon, but it holds **two** black marks, a star and a dot.
25	D	Along the top row the square on the **right** is taken away, and the star and the circle stay as they were. So the dot on the right of the hexagon must go, leaving the triangle: D. A has taken away the triangle instead, B has taken both, C has kept the dot but made it white, and E has kept both marks and made the hexagon white.
26	A	Along the top row the semicircle and the triangle **change places**, but neither is flipped: the semicircle still faces left and the triangle's square corner is still at its bottom left. So the arrow and the trapezium must change places and keep the way they face - the arrow, now on the right, still points **right**: A. B and C have the marks swapped but the arrow pointing left - B is flipped and C turned upside down. D has not changed at all, and E has made the circle white.
27	C	Two things happen along the top row: the trapezium is flipped **upside down** - its long side goes to the top but its upright side stays on the right - **and** its outline becomes dashed. So the triangle must be flipped upside down, with its square corner moving from the bottom left to the **top left**, and dashed: C. A is flipped but still solid, B is dashed but not flipped, D has its square corner at the bottom right, and E at the top right, which is a half turn.
28	E	Two things happen along the top row: the pentagon is filled in **black**, **and** the white circle inside it grows. So the hexagon must turn black and its white square grow: E. A is black but the square has not grown, B has a bigger square but the hexagon is still white, C is grey instead of black, and D has filled in the square instead of the hexagon.

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29	B	Two things happen along the top row: the shape at the **top** is filled in black, **and** the shape at the bottom is taken away. So the cross at the top of the hexagon must turn black and the circle below it must go: B. A has done it the wrong way round, blackening the circle and losing the cross. C has blackened the cross but kept the circle, D has lost the circle but left the cross white, and E has made the cross grey.
30	E	Two things happen along the top row: the trapezium is given a **half turn** - its long side goes to the top and its upright side moves from the right to the left - **and** it grows. A half turn carries the triangle's square corner from the bottom left to the **top right**, and it must grow too: E. A is turned but not bigger, B is bigger but not turned, C is bigger but its square corner is at the top left, which is a flip rather than a turn, and D is turned but smaller.
31	D	Two things happen along the top row: the arrow moves straight across from the right of the square to the **left**, still pointing the same way, **and** it turns grey. So the triangle must move across to the left of the circle, turn grey and keep its square corner at the **bottom left**: D. A has moved but is still black, B is grey but has not moved, C has gone up instead of across, and E is on the left and grey but flipped, so its square corner is at the bottom right.
32	C	Two things happen along the top row: the black dot is taken away, **and** the trapezium is turned a quarter turn **clockwise**, which stands its long side up on the left. So the square must go and the semicircle must turn a quarter turn clockwise, so that its curved edge faces **right**: C. A has lost the square but not turned, B has turned but kept the square, D faces left and E faces down.
33	B	Along each row the shape **shrinks** a step at a time and nothing else changes. B is the smallest triangle, still white and still pointing up. A has grown back to the size the row started at, C has not changed, D has shrunk two steps at once, and E is the right size but grey.

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34	E	Along each row the shape stays the same but gets darker: white, then **light grey**, then **black**. E is the triangle in black. A is only grey, B has gone back to white, C is dotted, and D is still light grey and has shrunk.
35	A	Along each row every shape has **one more side** than the one before: three, four and five sides in the top row, and five, six and seven in the middle. The bottom row has four and then five, so the last shape must have **six**: A, the hexagon. B has five sides, the same as the shape before it, C has seven, D four and E eight.
36	C	Along each row the shape stays still and the black dot moves on **one corner clockwise** each time - top left, top right, bottom right, bottom left, and round again. In the bottom row it has gone from the bottom right to the bottom left, so next it goes to the **top left**: C. A has gone back to the bottom right, B has jumped across to the top right, D has not moved, and E is in the middle.
37	D	Along each row the shape turns **three eighths of a turn clockwise** each time. The arrow, for example, points right, then down and to the left, then straight up. The trapezium has turned once, so turn it three eighths clockwise again: that leaves its long side standing up on the **right** and its short upright side lying along the top: D. A has turned back the other way, B has turned only a quarter turn, C a half turn, and E is a mirror image.
38	A	Along each row two things happen at every step: one more black dot is added, **and** the shape gets darker - white, light grey, then grey. The hexagon has two dots and is light grey, so the last one has **three** dots and is **grey**: A. B has three dots but is still light grey, C is grey but has only two dots, D has three dots but has gone white, and E is grey with only one dot.
39	E	Along each row the outside shape gets **darker** - white, light grey, dark grey - while the mark inside gets **lighter** - black, grey, white. So the last square is dark grey with a white triangle: E. A has a dark square but the triangle is still grey, B has a white triangle but the square is still light grey, C has made the square black, and D has gone back to the start of the row.

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40	B	Along each row two things happen at every step: the shape gets **smaller**, **and** it rises up its box. B is the smallest pentagon, the highest of the three. A has shrunk but not risen, C has risen but not shrunk, D has shrunk but sunk back to the bottom, and E has risen but grown.
41	D	The kites take F and the semicircle takes G, so the top letter is the shape. The solid outline takes X and the dashed ones take Y, so the bottom letter is the outline. A semicircle with a solid outline is GX.
42	C	The dark grey shape takes R and the striped ones take S, so the top letter is the shading. The arrowheads take V and the trapezium takes W, so the bottom letter is the shape. A dark grey trapezium is RW.
43	B	The top letter counts the parts with a **curved** edge: none takes L, one takes M and two take N - the hexagon holding a circle takes M, the same as the circle holding a square. The bottom letter is the outline of the big shape: solid takes X and dashed takes Y. The test shape is a dashed pentagon holding a dot - one curved part - so MY.
44	E	Each picture has a big grey shape and a small one beside it, on either side. The top letter is the **big** shape: a circle takes D, a triangle E and a square F - the small shape does not count. The bottom letter is the shading of the **small** shape: black takes J and white takes K. The test shape is a big triangle beside a small white square, so EK.
45	C	The shading changes every time and is not coded. The top letter counts the shapes: two take P and three take Q. The bottom letter is the kind of shape: circles take X, squares Y and triangles Z. The test shape is two squares, so PY.
46	D	Add up the sides. A square and a triangle make 4 + 3 = 7 and take J, a pentagon and a triangle make 8 and take K, and a hexagon and a triangle make 9 and take L, so the top letter is the **total number of sides**. The bottom letter says whether anything is dashed: nothing takes X and one dashed part takes Y. The test shape is a dashed triangle beside a square - 3 + 4 = 7 sides - so JY.

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47	A	The top letter counts how many of the three shapes are **shaded** at all - grey, black, dotted, striped or dark grey: one takes D, two take E and three take F. The bottom letter says whether there is a **circle** in the row: none takes V and one takes W. The test row has all three shapes shaded and a circle among them, so FW.
48	E	The shapes are different sizes and turned different ways, and the marks inside them are all different, so none of that is coded. The top letter is the shape outside: a hexagon takes Q, a triangle R and a square S. The bottom letter **counts** the marks inside: one takes X, two take Y and three take Z. The test shape is a triangle holding three marks, so RZ.

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