

Sources:

Comprehensive Adult Intelligence Test

- [CAIT Release Document v2.0 - Copy](#)
- Questions chosen are related to the block design test, a measure of spatial visualisation.

Perceptual ability test

- [PAT Update #1 - Copy-converted - Copy.pdf | PDF Host](#)
- Questions chosen are closely related to questions found in the Paper folding test Vz-2-BRACE.

Purdue Spatial Visualization Test

- [The Purdue Visualization of Rotations Test | SpringerLink](#)

Vandenburg and Kuse Mental Rotations Test

- [Mental Rotations, a Group Test of Three-Dimensional Spatial Visualization - Steven G. Vandenberg, Allan R. Kuse, 1978](#)

Original CodeRunner

- Questions used include: Embedded figures, Object Shadows, Cube intersection
- <https://doi.org/10.1145/3502718.3524756>

Assessment Training

- <https://www.assessment-training.com/Training/Free#/test/268?mode=free&pid=479>

Santa Barbara Solids Test Version 4

- [Inferring cross sections of 3D objects: A new spatial thinking test - ScienceDirect\](#)
- A novel spatial ability test, the test measures a skill distinct from mental rotation and perspective change.
- Significant positive correlation between total score on the test and measures of mental rotation (vk) and perspective taking (a modified version of Guays visualisation views test).

Spatial Orientation Test

- [A dissociation between object manipulation spatial ability and spatial orientation ability | SpringerLink](#)
- [A computerised spatial orientation test | SpringerLink](#)
- <https://hegarty-lab.psych.ucsb.edu/sites/default/files/2022-06/PTSOT.pdf>

Question	Description
01-03 EX	<p>Answer: 8</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: Use the following example to help you to answer questions 1-3. EXAMPLE QUESTION: Determine the number of primitive objects in the given 2D objects. Write your answer as an integer in the answer box.</p>
01	<p>Answer: 2</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: What is the minimum number of triangles needed to create the image below? Write your answer as an integer in the answer box.</p>
02	<p>Answer: 11</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: How many hexagons are in the object below? Write your answer as an integer in the answer box.</p>
03	<p>Answer: 10</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: A square is a quadrilateral with four equal-length sides and four right angles. How many squares are in the object below. Write your answer as an integer in the answer box.</p>
04-06 EX	<p>Answer: A</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: Use the following example to help you to answer questions 4-6. EXAMPLE QUESTION: Determine the shadow cast by an object from a single-point light source. Select the correct answer from the available options. The answer in this instance is A.</p>
04	<p>Answer: A</p> <p>Type: Spatial Perception</p>

	<p>Source: Original CodeRunner</p> <p>Description: Determine the shadow cast by an object from a single-point light source. Select the correct answer from the available options.</p>
05	<p>Answer: C</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: Determine the shadow cast by an object from a single-point light source. Select the correct answer from the available options.</p>
06	<p>Answer: A</p> <p>Type: Spatial Perception</p> <p>Source: Original CodeRunner</p> <p>Description: Determine the shadow cast by an object from a single-point light source. Select the correct answer from the available options.</p>
07-09 EX	<p>Answer: 2, 4, 6</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Use the following example to help you to answer questions 7-9. EXAMPLE QUESTION: Select THREE options that combine to make the complete shape shown below without overlapping. Pieces may be rotated 360 degrees. The answer in this instance is 2, 4, 6.</p>
07	<p>Answer: 1, 2, 3</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select THREE options that combine to make the complete shape shown below without overlapping. Pieces may be rotated 360 degrees.</p>
08	<p>Answer: 2, 3, 4</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select THREE options that combine to make the complete shape shown below without overlapping. Pieces may be rotated 360 degrees.</p>
09	<p>Answer: 1, 2, 6</p>

	<p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select THREE options that combine to make the complete shape shown below without overlapping. Pieces may be rotated 360 degrees.</p>
10-12 EX	<p>Answer: B</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Use the following example to help you to answer questions 10-12. EXAMPLE QUESTION: Select the segmented blouse that matches the whole image shown below. The segmented pieces are always pushed together with adjacent blocks. They cannot be spatially moved in any way, only pushed together to remove segmentation. However, sometimes the image above can be rotated 360 degrees relative to the segmented blocks. In this instance the answer is B.</p>
10	<p>Answer: D</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select the segmented blouse that matches the whole image shown below. The segmented pieces are always pushed together with adjacent blocks. They cannot be spatially moved in any way, only pushed together to remove segmentation. However, sometimes the image above can be rotated 360 degrees relative to the segmented blocks.</p>
11	<p>Answer: A</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select the segmented blouse that matches the whole image shown below. The segmented pieces are always pushed together with adjacent blocks. They cannot be spatially moved in any way, only pushed together to remove segmentation. However, sometimes the image above can be rotated 360 degrees relative to the segmented blocks.</p>
12	<p>Answer: C</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Comprehensive Adult Intelligence Test</p> <p>Description: Select the segmented blouse that matches the whole image shown below. The segmented pieces are always pushed together with adjacent blocks. They cannot be spatially moved in any way, only pushed</p>

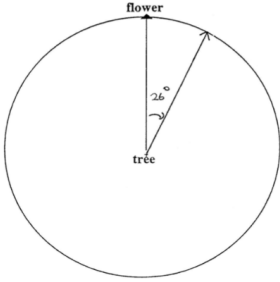
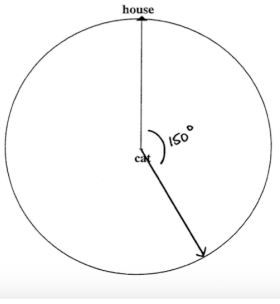
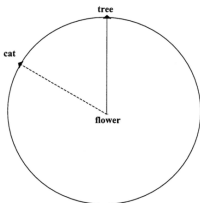
	<p>together to remove segmentation. However, sometimes the image above can be rotated 360 degrees relative to the segmented blocks.</p>
13-15 EX	<p>Answer: A</p> <p>Type: Mental Rotation</p> <p>Source: Purdue Spatial Visualisation test</p> <p>Description: Use the following example to help you to answer questions 13-15. EXAMPLE QUESTION: The top row in the image shows two views of the same object. The object on the right is obtained by rotating the object on the left. What object do we obtain from the options in the bottom row, if we apply the same rotation to the object in the middle row? Select the correct answer from the available options. In this instance the answer is A.</p>
13	<p>Answer: E</p> <p>Type: Mental Rotation</p> <p>Source: Purdue Spatial Visualisation test</p> <p>Description: The top row in the image shows two views of the same object. The object on the right is obtained by rotating the object on the left. What object do we obtain from the options in the bottom row, if we apply the same rotation to the object in the middle row? Select the correct answer from the available options.</p>
14	<p>Answer: E</p> <p>Type: Mental Rotation</p> <p>Source: Purdue Spatial Visualisation test</p> <p>Description: The top row in the image shows two views of the same object. The object on the right is obtained by rotating the object on the left. What object do we obtain from the options in the bottom row, if we apply the same rotation to the object in the middle row? Select the correct answer from the available options.</p>
15	<p>Answer: E</p> <p>Type: Mental Rotation</p> <p>Source: Purdue Spatial Visualisation test</p> <p>Description: The top row in the image shows two views of the same object. The object on the right is obtained by rotating the object on the left. What object do we obtain from the options in the bottom row, if we apply the same rotation to the object in the middle row? Select the correct answer from the available options.</p>
16-18 EX	<p>Answer: A, C</p>

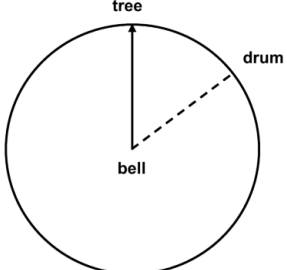
	<p>Type: Mental Rotation</p> <p>Source: V&K Mental Rotations Test</p> <p>Description: Use the following example to help you to answer questions 16-18. EXAMPLE QUESTION: The image shows five views of objects. Select TWO of the four right-most rotated objects whose shape matches the leftmost object. In this instance, the answer is A, C.</p>
16	<p>Answer: B, D</p> <p>Type: Mental Rotation</p> <p>Source: V&K Mental Rotations Test</p> <p>Description: The image shows five views of objects. Select from the four rightmost objects, Select TWO rotated objects who match the object on the far left.</p>
17	<p>Answer: B, D</p> <p>Type: Mental Rotation</p> <p>Source: V&K Mental Rotations Test</p> <p>Description: The image shows five views of objects. Select from the four rightmost objects, Select TWO rotated objects who match the object on the far left.</p>
18	<p>Answer: B, C</p> <p>Type: Mental Rotation</p> <p>Source: V&K Mental Rotations Test</p> <p>Description: The image shows five views of objects. Select from the four rightmost objects, Select TWO rotated objects who match the object on the far left.</p>
19-21 EX	<p>Answer: D</p> <p>Type: Spatial Visualisation</p> <p>Source: Perceptual Ability Test</p> <p>Description: Use the following example to help you to answer the questions 19-21. EXAMPLE QUESTION: The images depict a square piece of paper being folded, once folded, a hole is punched into the paper. The paper is then unfolded. Where are the punched holes located on the paper? Select the correct answer from the available options. In this instance the answer is shown on the far right, above the letter D.</p>
19	<p>Answer: B</p>

	<p>Type: Spatial Visualisation</p> <p>Source: Perceptual Ability Test</p> <p>Description: The images depict a square piece of paper being folded, once folded, a hole is punched into the paper. The paper is then unfolded. Where are the punched holes located on the paper? Select the correct answer from the available options.</p>
20	<p>Answer: D</p> <p>Type: Spatial Visualisation</p> <p>Source: Perceptual Ability Test</p> <p>Description: The images depict a square piece of paper being folded, once folded, a hole is punched into the paper. The paper is then unfolded. Where are the punched holes located on the paper? Select the correct answer from the available options.</p>
21	<p>Answer: D</p> <p>Type: Spatial Visualisation</p> <p>Source: Perceptual Ability Test</p> <p>Description: The images depict a square piece of paper being folded, once folded, a hole is punched into the paper. The paper is then unfolded. Where are the punched holes located on the paper? Select the correct answer from the available options.</p>
22-24 EX	<p>Answer: D</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Assessment Training</p> <p>Description: Use the following example to help you to answer questions 22-24. EXAMPLE QUESTION: The image on the left shows an unfolded cube or a folded cube. Which of the cubes on the right, unfolded or folded can be made from the cube on the left. Select the correct answer from the available options. In this instance the answer is D.</p>
22	<p>Answer: B</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Assessment Training</p> <p>Description: The image on the left shows an unfolded cube or a folded cube. Which of the cubes on the right, unfolded or folded can be made from the cube on the left. Select the correct answer from the available options</p>
23	<p>Answer: C</p>

	<p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Assessment Training</p> <p>Description: The image on the left shows an unfolded cube or a folded cube. Which of the cubes on the right, unfolded or folded can be made from the cube on the left. Select the correct answer from the available options</p>
24	<p>Answer: C</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Assessment Training</p> <p>Description: The image on the left shows an unfolded cube or a folded cube. Which of the cubes on the right, unfolded or folded can be made from the cube on the left. Select the correct answer from the available options</p>
25-27 EX	<p>Answer: A, B</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Original CodeRunner</p> <p>Description: Use the following example to help you to answer questions 25-27. EXAMPLE QUESTION: The image on the left shows a cube intersected by a ray. The image on the right shows an unfolded version of that cube. Indicate the intersection points of the ray with the faces of the cube by selecting TWO possible options of the intersection as shown in the image. In this instance the answer is a, b.</p>
25	<p>Answer: B, E</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Original CodeRunner</p> <p>Description: The image on the left shows a cube intersected by a ray. The image on the right shows an unfolded version of that cube. Indicate the intersection points of the ray with the faces of the cube by selecting TWO possible options of the intersection as shown in the image.</p>
26	<p>Answer: B, D</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Original CodeRunner</p> <p>Description: The image on the left shows a cube intersected by a ray. The image on the right shows an unfolded version of that cube. Indicate the intersection points of the ray with the faces of the cube by selecting TWO possible options of the intersection as shown in the image.</p>

27	<p>Answer: A, C</p> <p>Type: Spatial Visualisation, Mental Rotation</p> <p>Source: Original CodeRunner</p> <p>Description: The image on the left shows a cube intersected by a ray. The image on the right shows an unfolded version of that cube. Indicate the intersection points of the ray with the faces of the cube by selecting TWO possible options of the intersection as shown in the image.</p>
28-31 EX	<p>Answer: C</p> <p>Type: Spatial Perception, Spatial Visualisation</p> <p>Source: Santa Barbara Solids Test</p> <p>Description: Use the following example to help you to answer questions 28-31. EXAMPLE QUESTION: The grey plane slices a cross-section out of the object in the image shown. Imagine you are facing the slicing plane head-on. Select the cross-section you would see. Select the correct answer from the available options. In this instance the answer is c.</p>
28	<p>Answer: C</p> <p>Type: Spatial Perception, Spatial Visualisation</p> <p>Source: Santa Barbara Solids Test</p> <p>Description: The grey plane slices a cross-section out of the object in the image shown. Imagine you are facing the slicing plane head-on. Select the cross-section you would see. Select the correct answer from the available options.</p>
29	<p>Answer: A</p> <p>Type: Spatial Perception, Spatial Visualisation</p> <p>Source: Santa Barbara Solids Test</p> <p>Description: The grey plane slices a cross-section out of the object in the image shown. Imagine you are facing the slicing plane head-on. Select the cross-section you would see. Select the correct answer from the available options.</p>
30	<p>Answer: A</p> <p>Type: Spatial Perception, Spatial Visualisation</p> <p>Source: Santa Barbara Solids Test</p> <p>Description: The grey plane slices a cross-section out of the object in the image shown. Imagine you are facing the slicing plane head-on. Select the cross-section you would see. Select the correct answer from the available</p>

	options.
31-3 EX	<p>Answer:</p>  <p>Type: Spatial Perception</p> <p>Source: Spatial Orientation Test</p> <p>Description: Use the following example to help you to answer questions 31-33. EXAMPLE QUESTION: There is an array of different objects scattered below. Imagine you are standing at the tree and facing the flower. Indicate where the house is from this position. Drag and drop the house marker along the imaginary line pointing in the direction of the house. The answer in this instance is shown below.</p>
31	<p>Answer:</p>  <p>Type: Spatial Perception</p> <p>Source: Spatial Orientation Test</p> <p>Description:</p> <p>Description: There is an array of different objects scattered below. Imagine you are standing at the cat and facing the house. Indicate where the traffic light is from this position. Drag and drop the traffic light marker along the imaginary line pointing in the direction of the traffic light.</p>
32	<p>Answer:</p>  <p>Type: Spatial Perception</p> <p>Source: Spatial Orientation Test</p>

	<p>Description: There is an array of different objects scattered below. Imagine you are standing at the flower and facing the tree. Indicate where the cat is from this position. Drag and drop the cat marker along the imaginary line pointing in the direction of the cat.</p>
33	<p>Answer:</p>  <p>Type: Spatial Perception</p> <p>Source: Spatial Orientation Test</p> <p>Description: There is an array of different objects scattered below. Imagine you are standing at the bell and facing the tree. Indicate where the drum is from this position. Drag and drop the drum marker along the imaginary line pointing in the direction of the drum.</p>