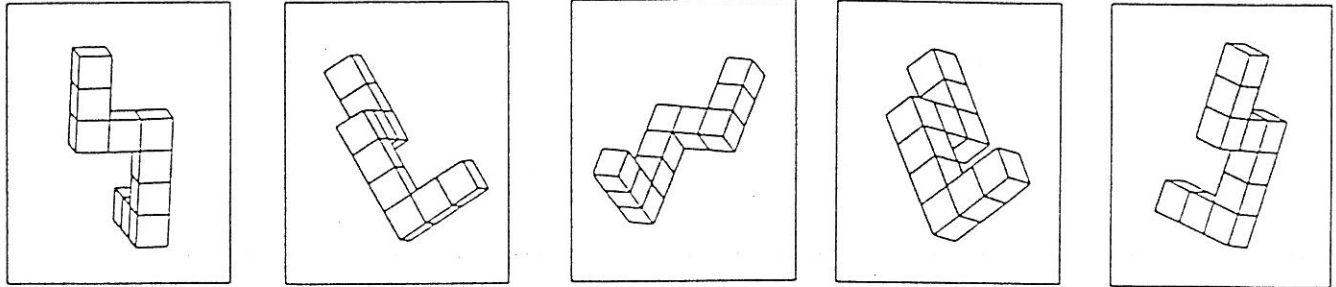


MENTAL ROTATIONS TEST

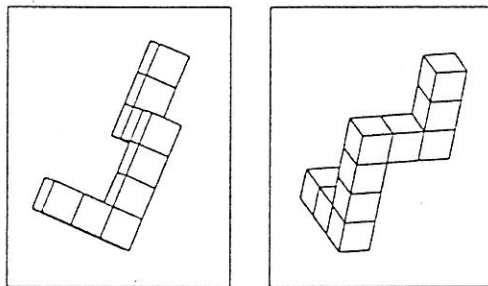
1

AUTOCAD drawings of Vandenberg & Kuse (1978)* items. Michael Peters, PhD, Dept. Psychology, University of Guelph, Guelph, ON, Canada N1G 2W1

Look at these five figures.



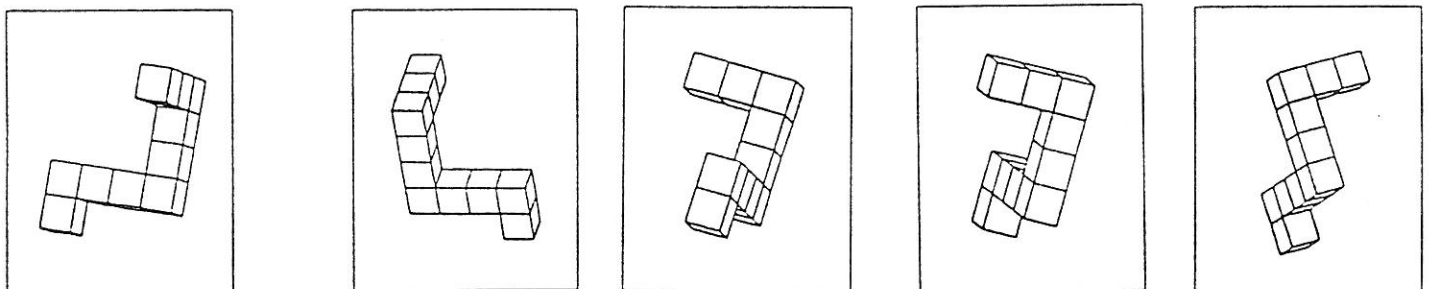
Note that these are all pictures of the same object which is shown from different angles. Try to imagine moving the object (or yourself with respect to the object), as you look from one drawing to the next.



Here are two drawings of a new figure that is different from the one shown in the first 5 drawings. Satisfy yourself that these two drawings show an object that is different and cannot be "rotated" to be identical with the object shown in the first five drawings.

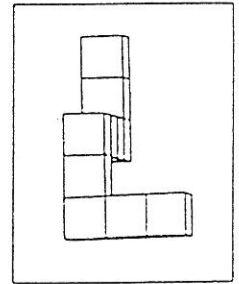
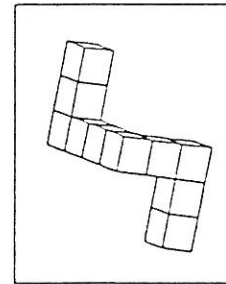
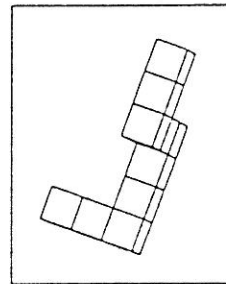
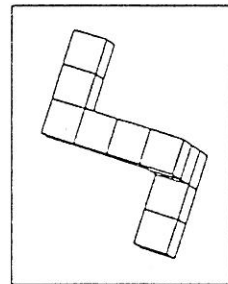
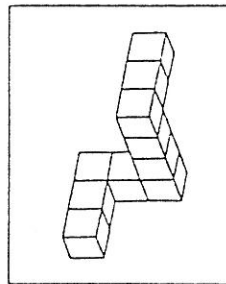
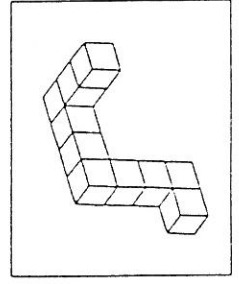
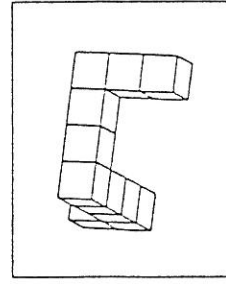
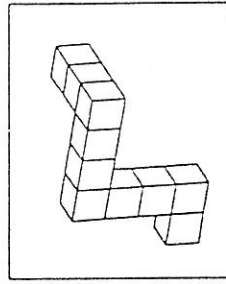
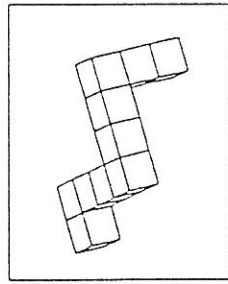
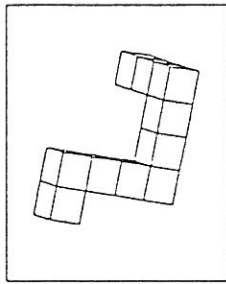
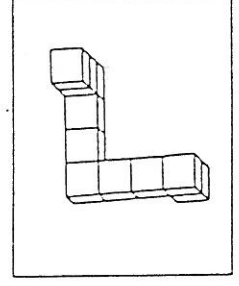
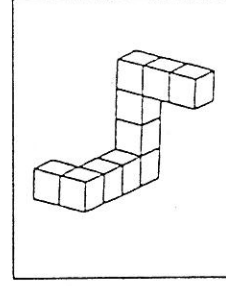
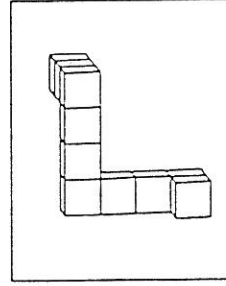
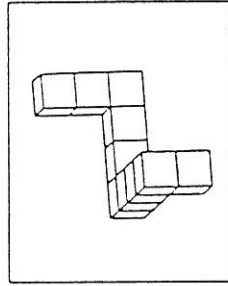
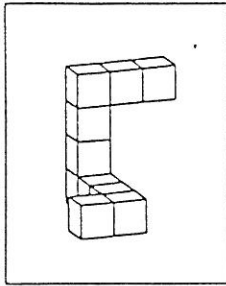
Now look at this object:

Two of these four drawings show the same object. Can you find those two? Put X's in the lower right corner.



If you marked the first and the third drawings, you made the correct choice.

Here are three more problems. Again, the target object is shown twice in each set of four alternatives from which you choose the correct ones.

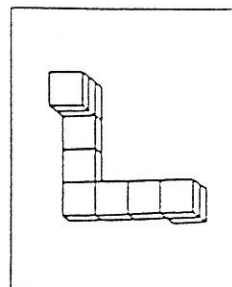
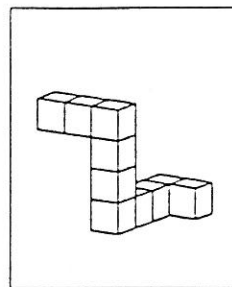
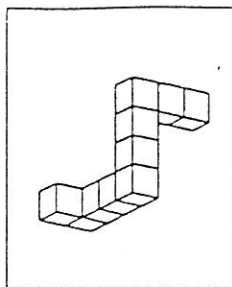
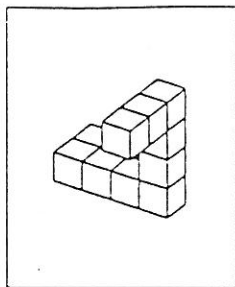
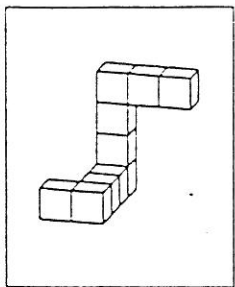


Correct choice for 1: second and third, for 2: first and fourth
3: first and third

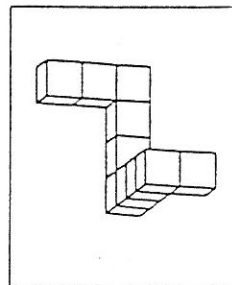
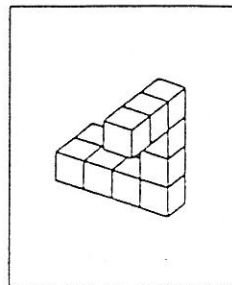
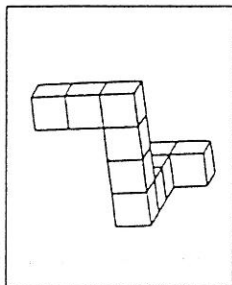
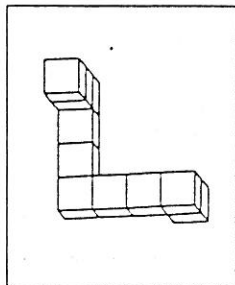
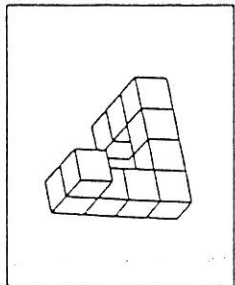
When you do the test, please remember that for each problem set there are two and only two figures that match the target figure. What is your best strategy in doing the problems? Because an incorrect choice is subtracted from a correct one, you are better off to check only one of the figures if you can be only sure of one. Of course, you will always try to get both of the figures that match.

* S.G. Vandenberg of the University of Colorado selected this subset of figures from a larger set devised by Shepard and Metzler. Two versions of the mental rotations test exist: one with 20 problems and one with 24 problems; this is the latter one. Because the quality of available reproductions has deteriorated over the course of making copies of copies, we have redrawn the set of figures with help of the AUTOCAD drawing program (the AUTOCAD drawings were done by Diane Duncan, School of Engineering, U of Guelph). It was decided not to use the natural perspective option provided by the program because the perspective shown here seems to give the clearest representation of the problems.

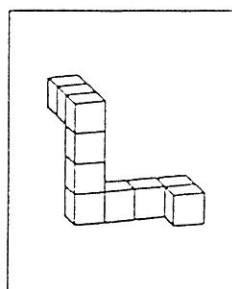
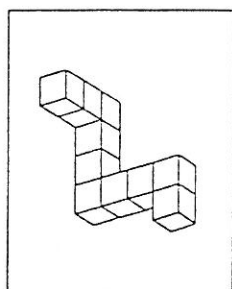
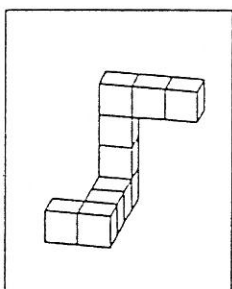
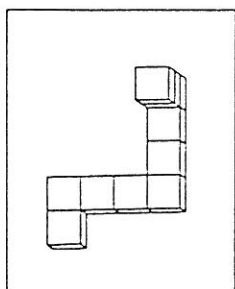
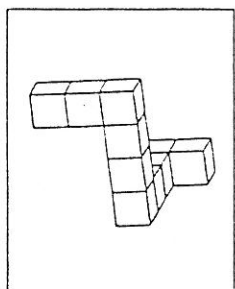
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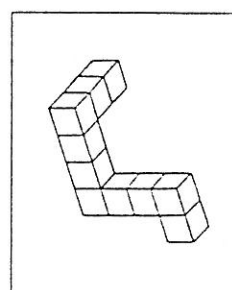
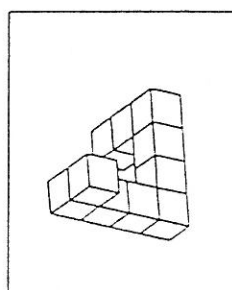
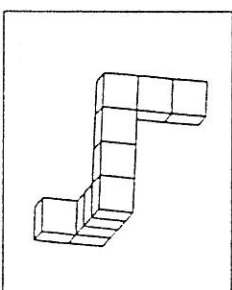
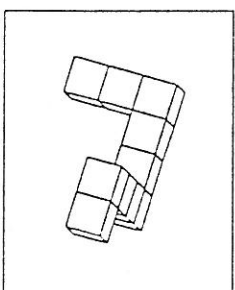
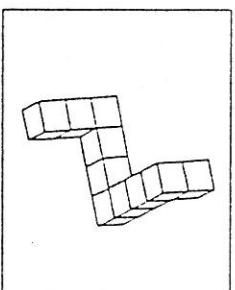
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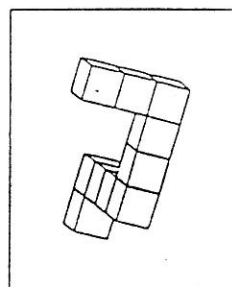
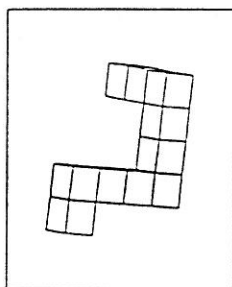
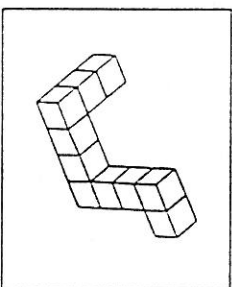
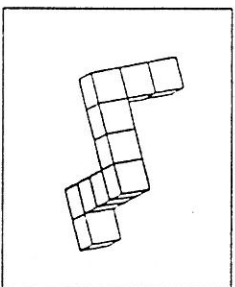
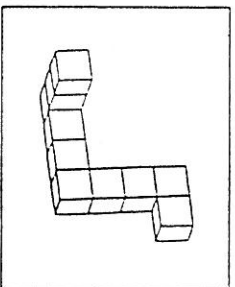
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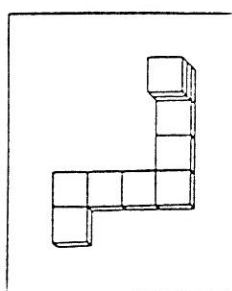
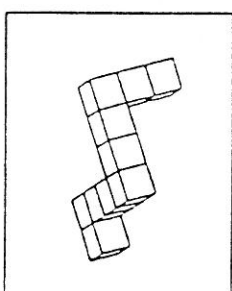
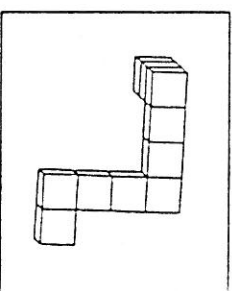
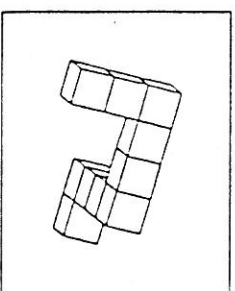
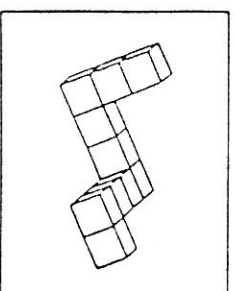
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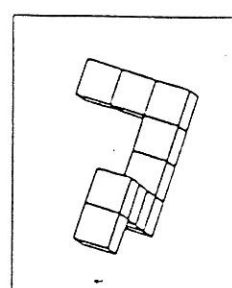
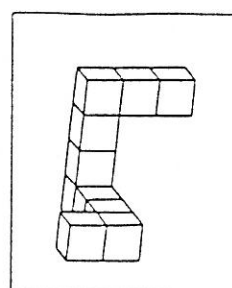
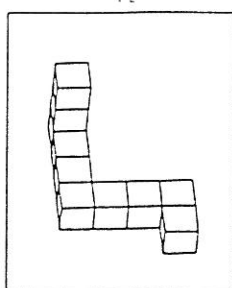
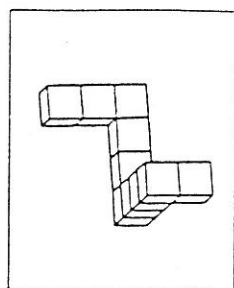
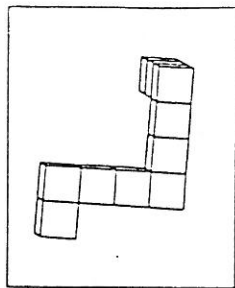
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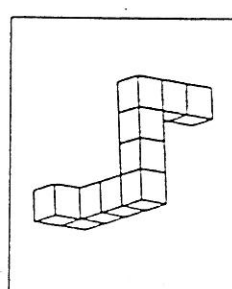
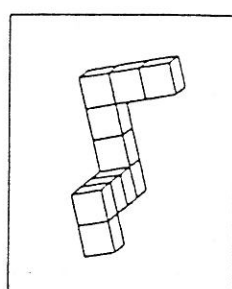
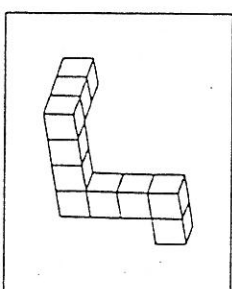
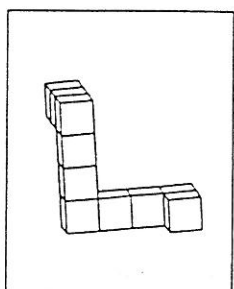
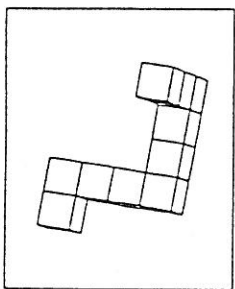
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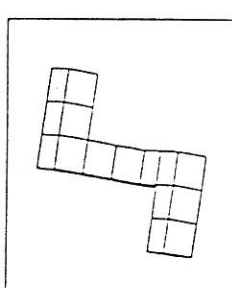
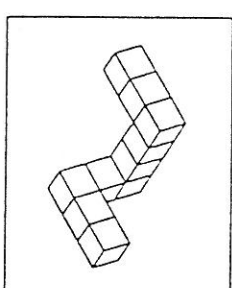
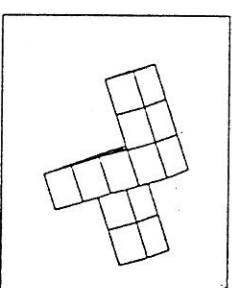
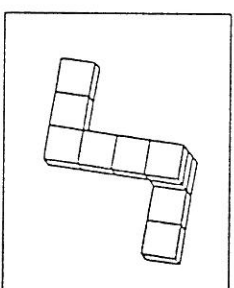
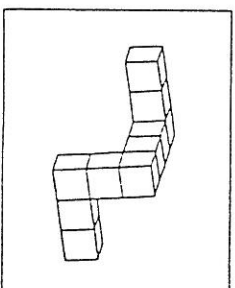
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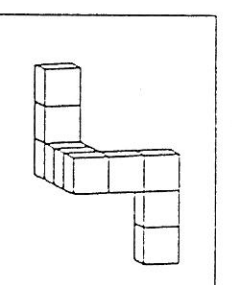
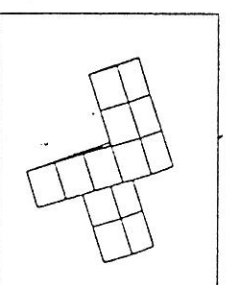
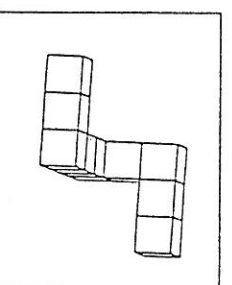
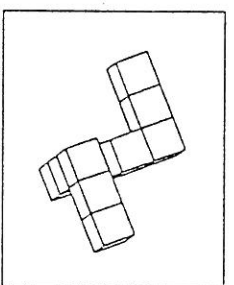
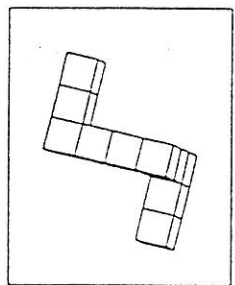
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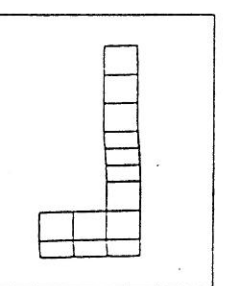
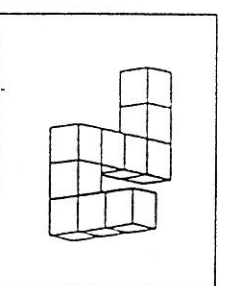
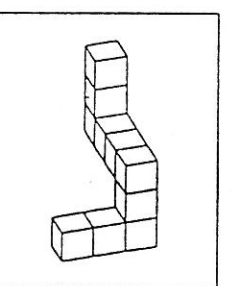
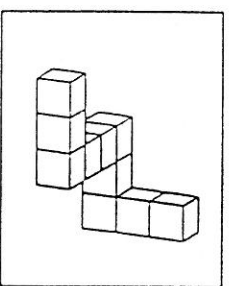
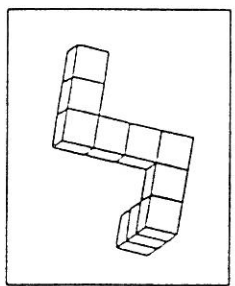
9.



10.



11.



12.

