

Match Games

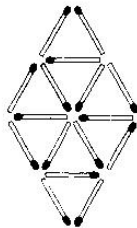
The insight Mabel needed to solve Professor Quibble's match puzzle is that she has not been told that the matches must remain on the plane. By going into a third dimension, the 12 matches form the 12 edges of a unit cube, which, of course, has 6 square faces. It is an insight similar to Rosie's when she found a way to cut the cheese.

A better known version of the same problem is to form four identical equilateral triangles with six matches. The solution in this case is to form the skeleton of a regular tetrahedron.

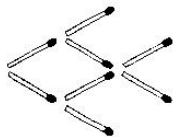
Here are six other clever match or toothpick puzzles that have aha! solutions. Can you do them?



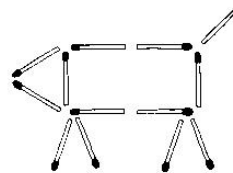
1. Move the smallest number of matches to make a square.



2. Remove the smallest number of matches to leave four equilateral triangles of the same size as the eight shown. There must be no loose ends.



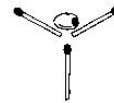
3. Move the smallest number of matches to make the fish swim the opposite way.



4. Move the smallest number of matches to make the pig look the opposite way.



5. Move the smallest number of matches to get the cherry outside the old-fashioned glass. The glass may have any orientation at the finish, but, of course, the cherry cannot be moved.



6. Move the smallest number of matches to get the olive outside the martini glass. As before, the glass at the finish may be turned any way you like, but the olive must not be moved.

It would spoil most of the fun if we printed the actual solutions, so instead we will give only the correct minimum numbers:

1. One.
2. Four.
3. Three.
4. Two.
5. Two.
6. None.