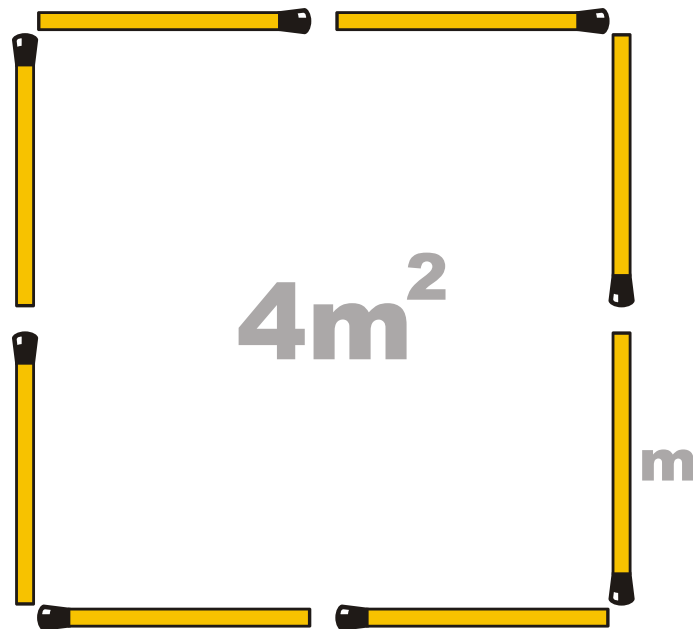
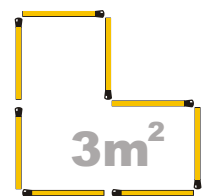


## Downsize 2x2

by Serhiy Grabarchuk, Jr.



*Example*



If the length of a matchstick is  $m$ , then the area of the 2x2 square shown in the center of the illustration can be presented as  $4m^2$ . When two matchsticks are moved as is shown in the *Example* in the lower right corner, then the area of the new reduced shape is  $3m^2$ .

Can you move three matchsticks in order to change the square into a shape of the area:

**Puzzle 1** (easier):  $2m^2$ ?

**Puzzle 2** (harder):  $3m^2$ ?

No damaging, loose ends or overlapping of the matchsticks is allowed.