

Toothpick Problem-solving

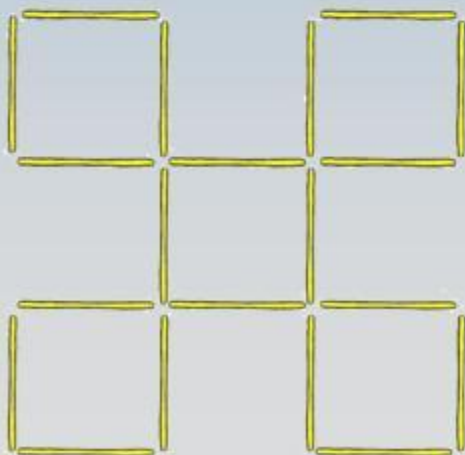
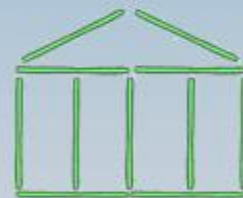
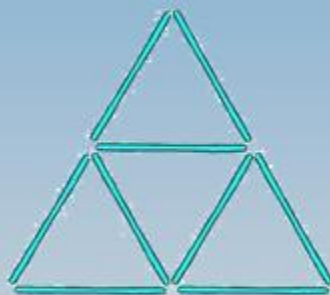
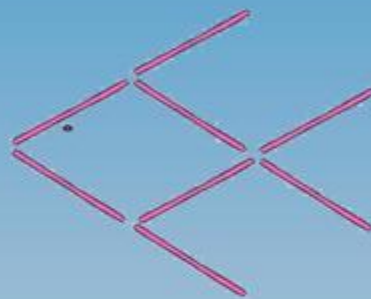


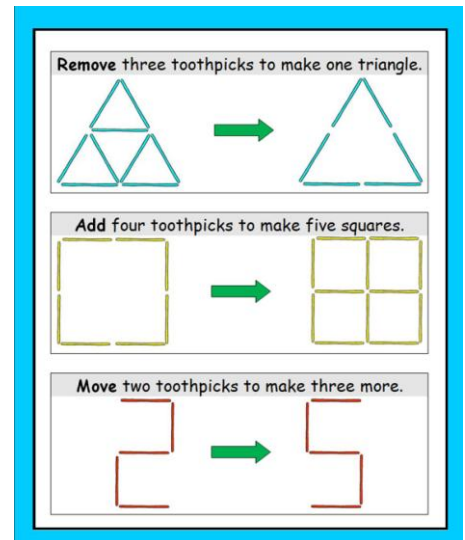
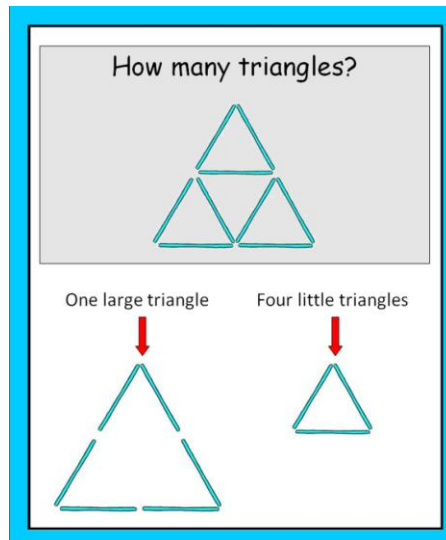
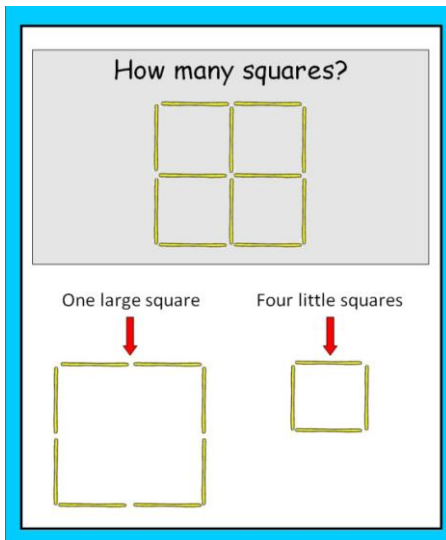
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Lesson Plans

Objective: Explain to your students that the goal of this activity is: *to solve problems using toothpicks*

Poster: Post all three posters as you work through this packet (located at the end of this packet) for students to see. The purpose of these posters (from the word "post") is to guide your students in their work. Let me explain...



A quick look at this design often results in an incorrect answer. Most students will identify four squares, failing to notice that there is a large square as well as the four little squares. The same is true for triangles.

There are three types of action a student may perform: add, subtract, or rearrange. I use the terms "add," "remove" and "move."

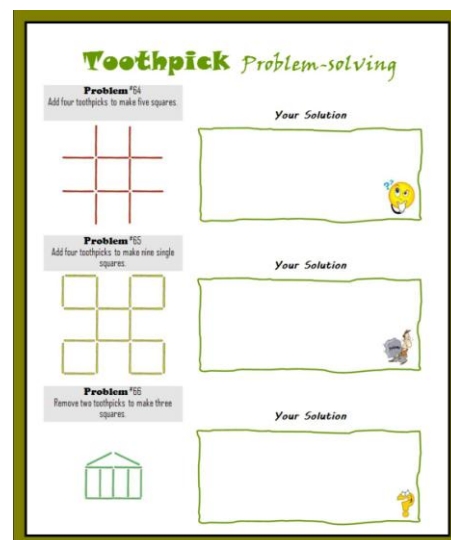
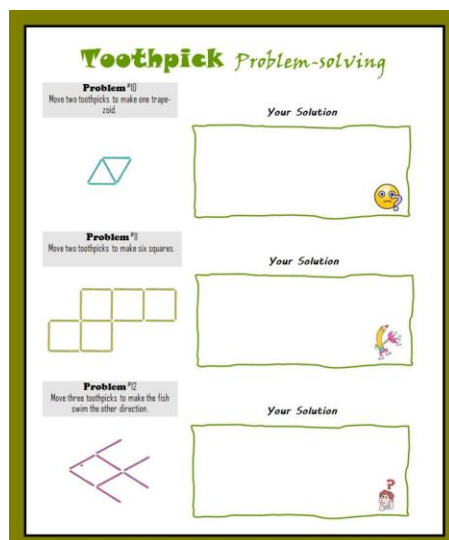
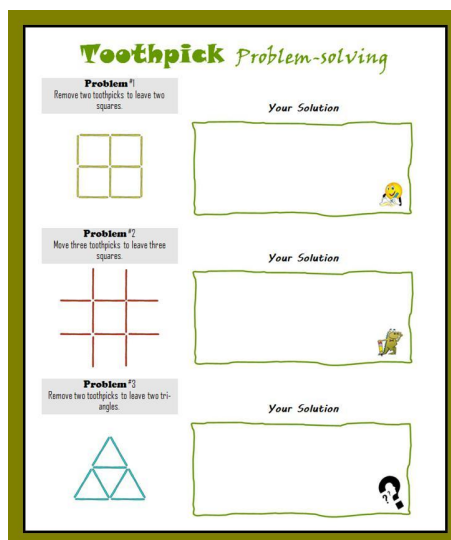
Toothpicks: Students need toothpicks for this activity. Why? We work better with something in our hands, to manipulate (hence the education term, manipulatives), much easier for the mind to grasp than abstract visualization. Think of long multiplication without the white board to help you. Imagine having to describe it in words. Not easy!

Why toothpicks? In the old days, matchsticks were used for this activity, but I prefer NOT to use them for very obvious reasons. I really don't want to get called into the principal's office to explain why my kids are catching things on fire in the restroom.

What kind of toothpicks? There are two types of toothpicks: the round kind and the flat kind. I always buy the flat kind. Why? They are stackable (like Popsicle sticks), forming a neat stack, so they don't roll off the desk as often. The round kind, typically found in restaurants in parts of the country where beef is served more frequently, tend to roll across the desk and onto the floor. And they're too pointy. Imagine your students poking each other in jest, ha-ha, and again, having to explain to the principle why students are stabbing each other on the playground using the weapons that YOU supplied. Find the flat kind and avoid the issues.

Be careful about explaining what students can't do (like build a toothpick pea-shooter with a straw and shooting them at each other). If you give them the idea, then they just might build it (against your wishes).

Printable Handouts: Here are three of my thirty-three handouts (see below).




Now, you are ready for lesson one. Let's go. Make copies and hand them out.

I ALWAYS have my students work in pairs/partners (except for tests). They prefer it, and so do I. Here are several reasons: 1) Two minds are better than one, as there is a greater chance of one student correcting the other and getting it right. 2) Socialization, talking, language, content-based discussion and problem solving. We are a social species. This idea of silence in the classroom is ridiculous, unproductive, and creates negative feelings towards schooling. 3) Turn-taking instead of the "every man for himself" approach of yester-year's schooling. 4) I need half as much paper/printing. There are lots of good reasons to assign work to partners and very few negatives. My students get used to this format quickly each year. It's every day, not a novelty. And I demand that they focus. I listen as I move around the room, aware of what they are saying and making sure that their talk is related to the work. And here is a trick I picked up: if THEY are watching YOU, then they aren't working.


Talking is NOT a privilege. It is a right and must be nurtured by us, the teachers and parents.

Toothpick Problem-solving

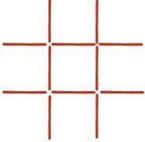
Problem #1
Remove two toothpicks to leave two squares.




Your Solution




Problem #2
Move three toothpicks to leave three squares.




Your Solution



Problem #3
Remove two toothpicks to leave two triangles.



Your Solution






Your solution: Do you want your students to use words? or pictures? or arrows to show Add, Remove or Move? Model for them exactly what you want them to do in the first few lessons and they'll do exactly that in the rest.

Add: draw a plus sign (+) to show an added toothpick.

Remove: draw an X on the drawing on the left to show a deleted toothpick.

Move: use an arrow, from the drawing on the left to their drawing on the right to show a moved toothpick.

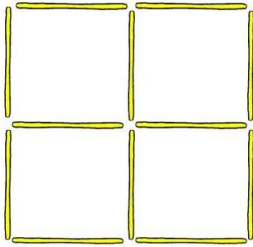
There are three formats that this lesson can take:

	Whole-class	Teach several lessons to the whole class, in the class. Take your time. Be the guide on the side and let them tell you how it is done.
	Homework	After a few lessons have occurred in class, then assign this as homework.
	Centers	Or, place this activity in a learning center.

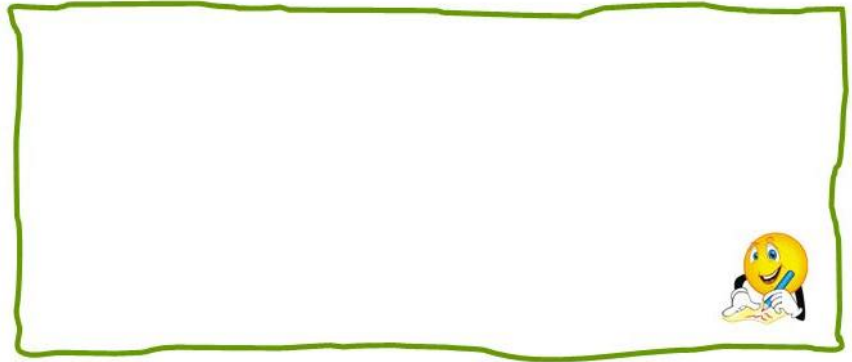
Toothpick Problem-solving

Problem #1

Remove two toothpicks to leave two squares.

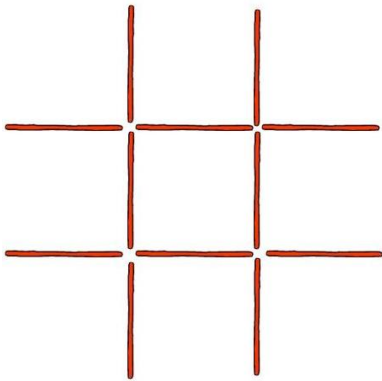


Your Solution

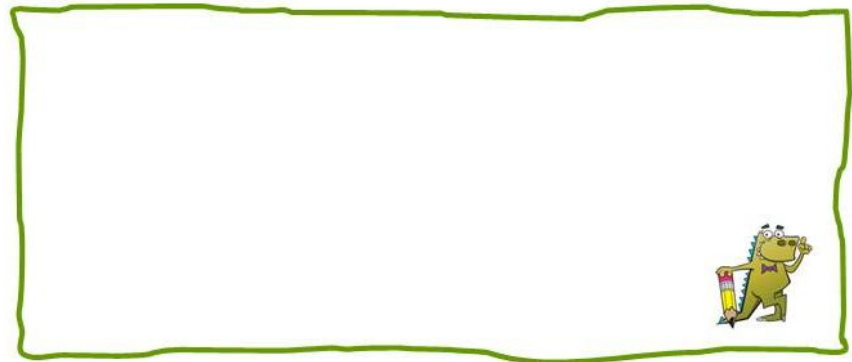


Problem #2

Move three toothpicks to leave three squares.

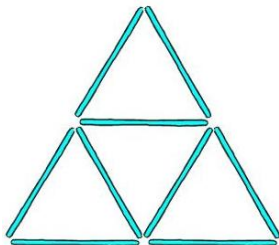


Your Solution

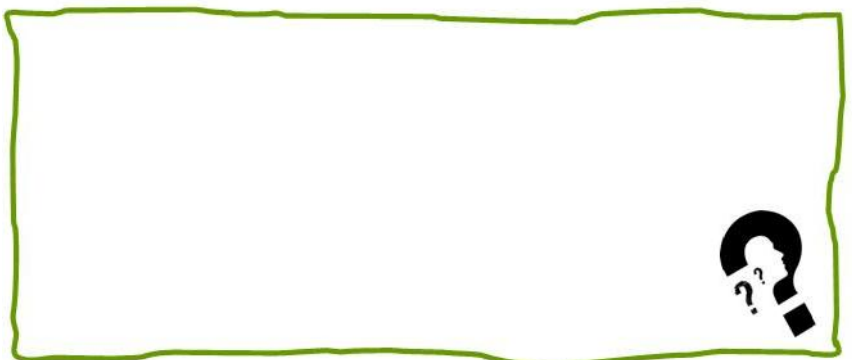


Problem #3

Remove two toothpicks to leave two triangles.



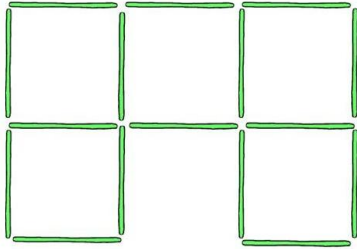
Your Solution



Toothpick Problem-solving

Problem #4

Move six toothpicks to make fifteen squares.

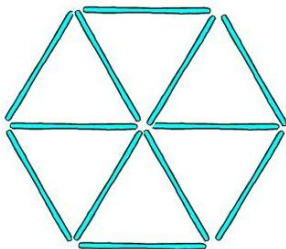


Your Solution



Problem #5

Remove four toothpicks to leave three triangles.

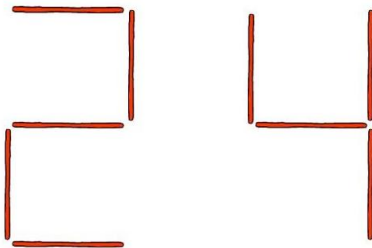


Your Solution

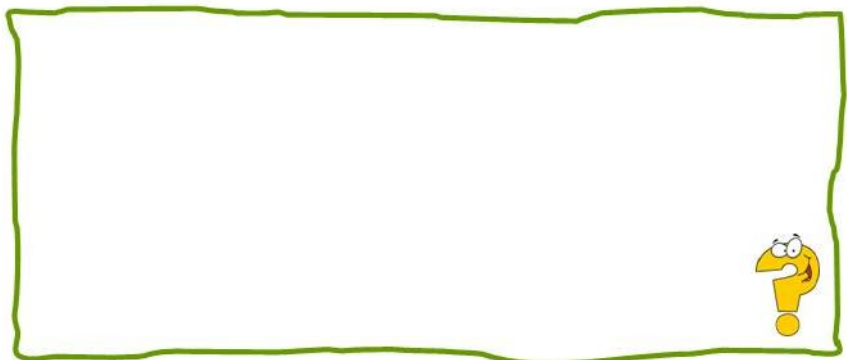


Problem #6

Add five toothpicks to make four squares.



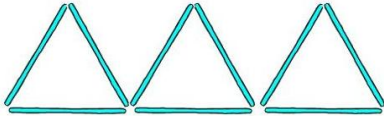
Your Solution



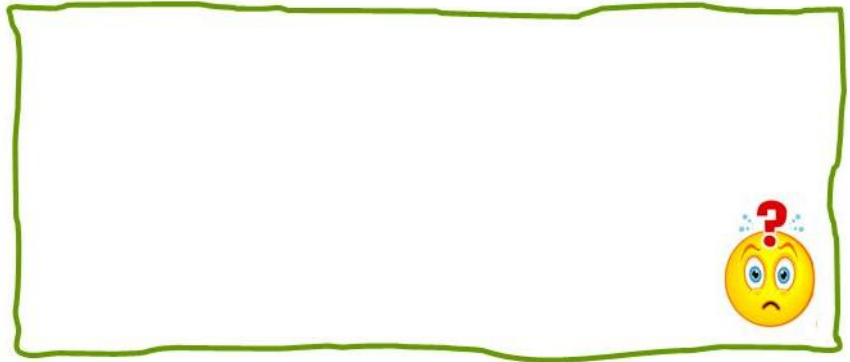
Toothpick Problem-solving

Problem #7

Move two toothpicks to make four triangles.

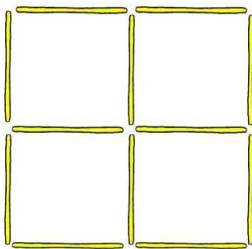


Your Solution



Problem #8

Remove four toothpicks to make two squares.

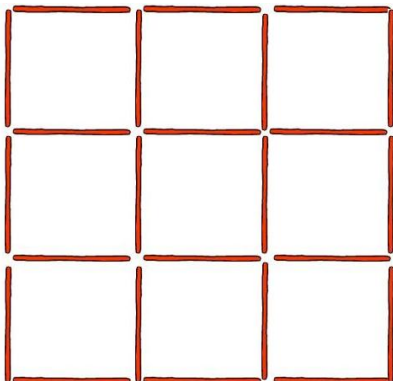


Your Solution



Problem #9

Remove six toothpicks to make five squares.



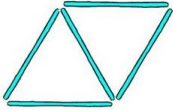
Your Solution



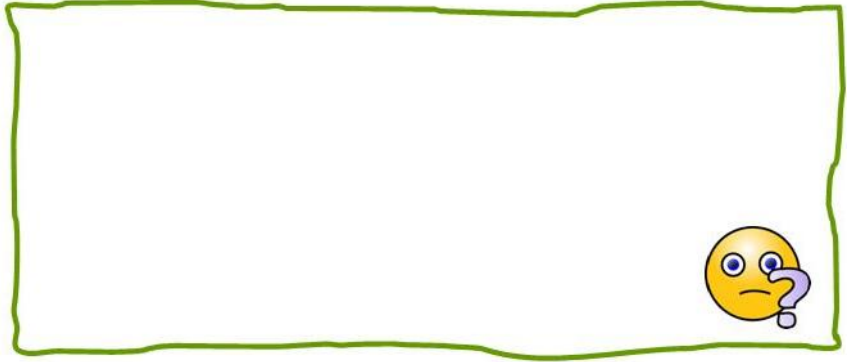
Toothpick Problem-solving

Problem #10

Move two toothpicks to make one trapezoid.

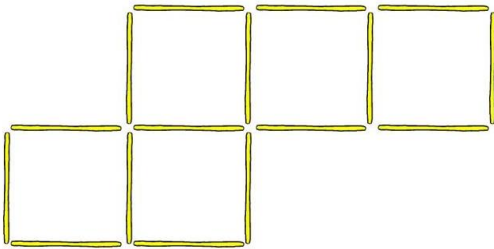


Your Solution



Problem #11

Move two toothpicks to make six squares.

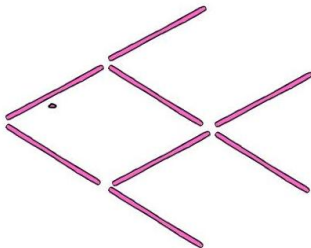


Your Solution

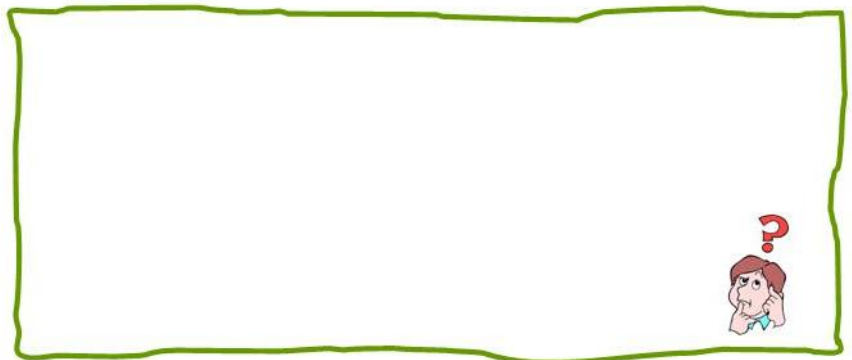


Problem #12

Move three toothpicks to make the fish swim the other direction.



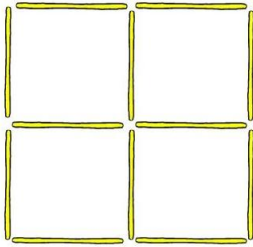
Your Solution



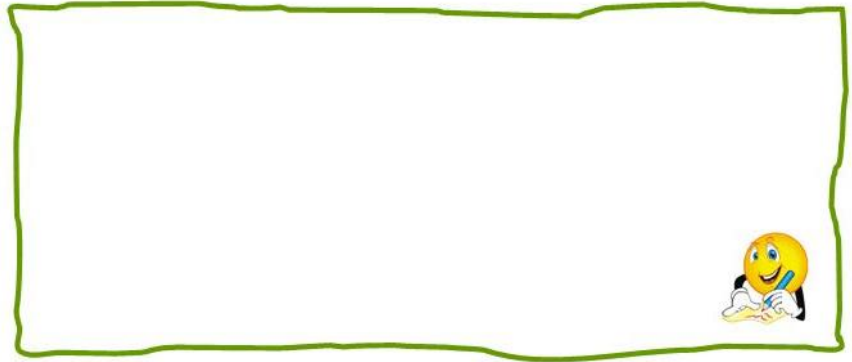
Toothpick Problem-solving

Problem #13

Move two toothpicks to make seven squares.

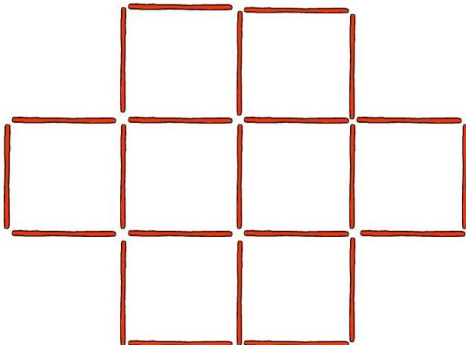


Your Solution



Problem #14

Remove four toothpicks to make five squares.

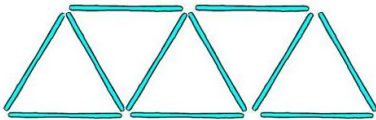


Your Solution

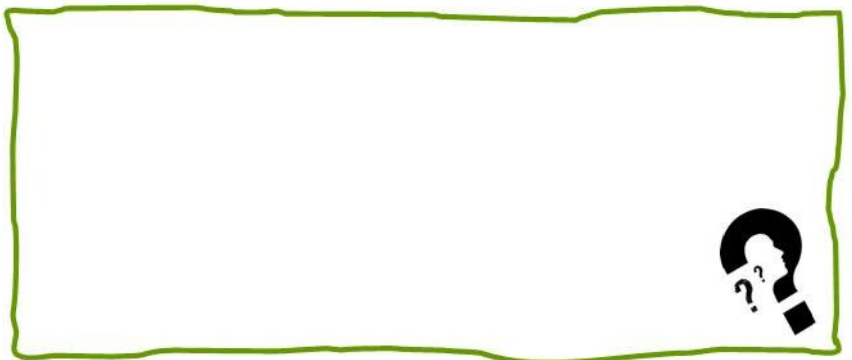


Problem #15

Remove three toothpicks to leave a trapezoid and a rhombus.



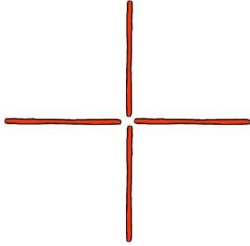
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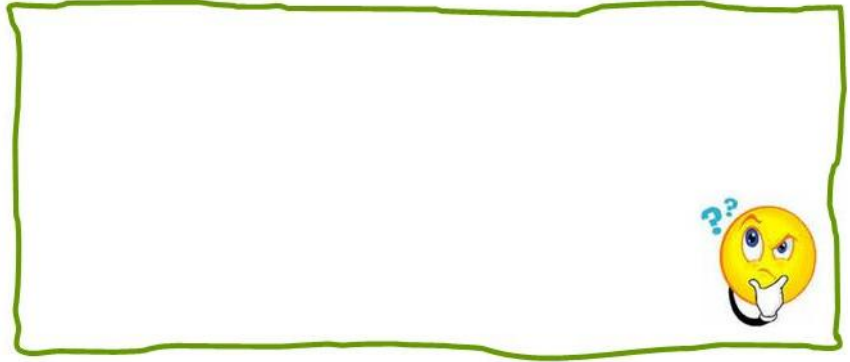
Toothpick Problem-solving

Problem #16

Add four toothpicks to make eight triangles.

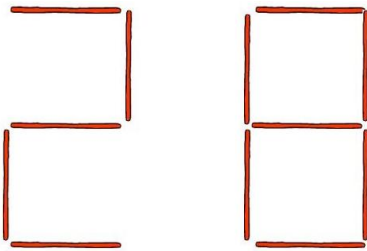


Your Solution

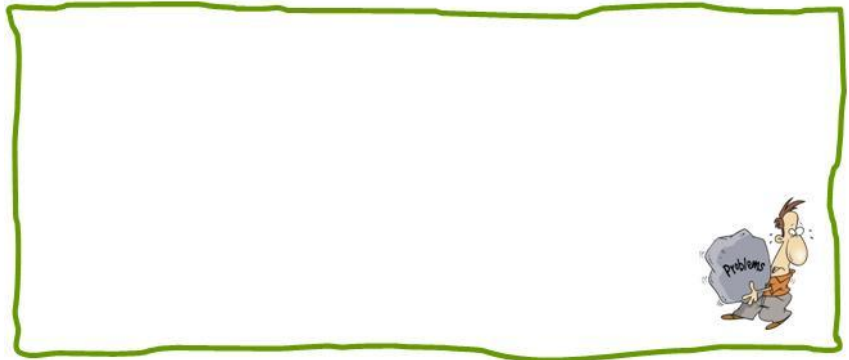


Problem #17

Move five toothpicks to make six triangles.

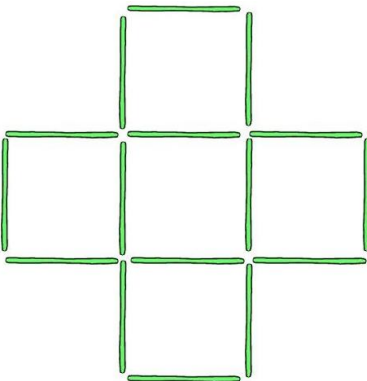


Your Solution

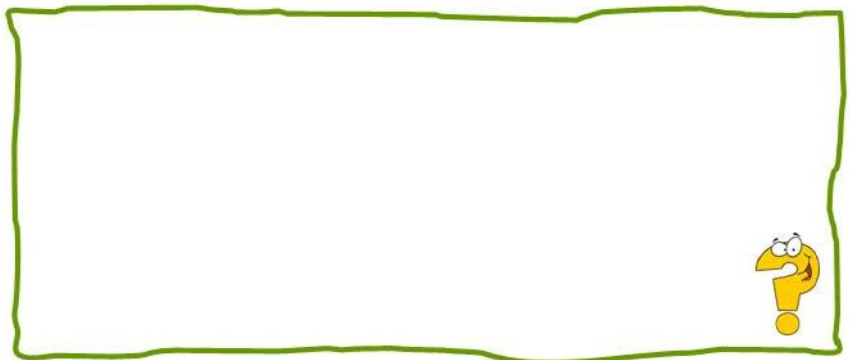


Problem #18

Add two toothpicks to make nine squares.



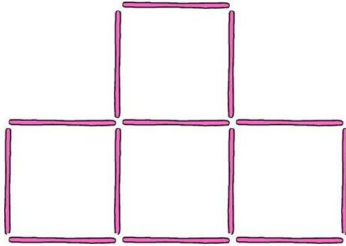
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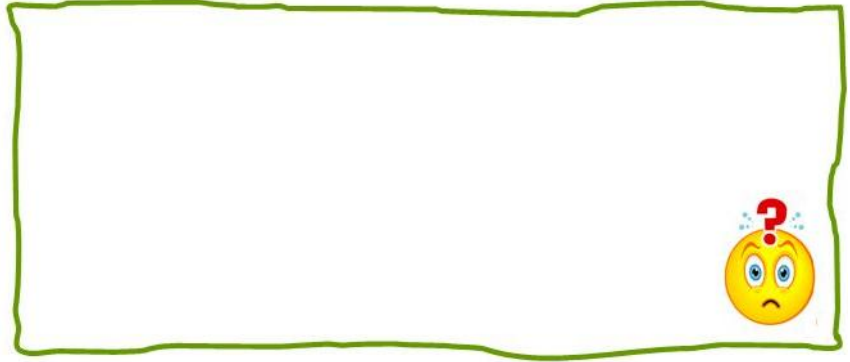
Toothpick Problem-solving

Problem #19

Remove one toothpick to make three squares.

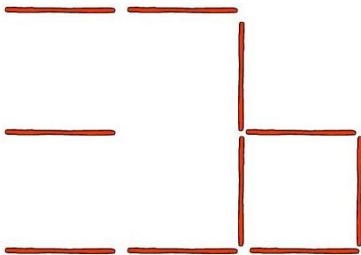


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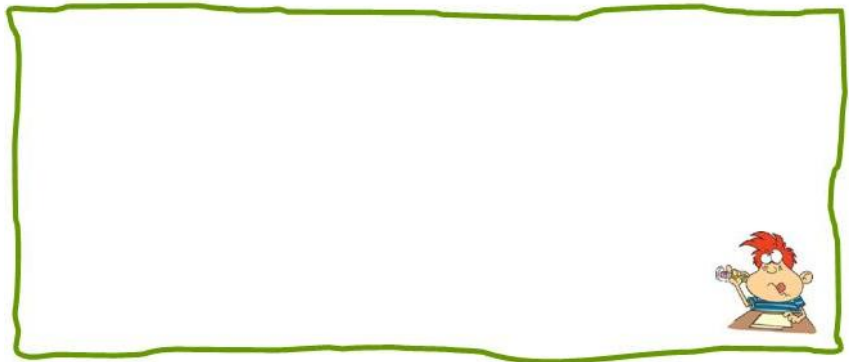


Problem #20

Move three toothpicks to leave two squares.

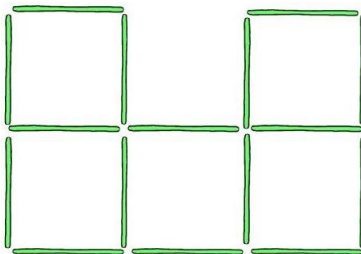


Your Solution



Problem #21

Add one toothpick to make eight squares.



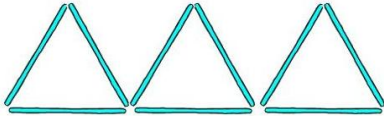
Your Solution



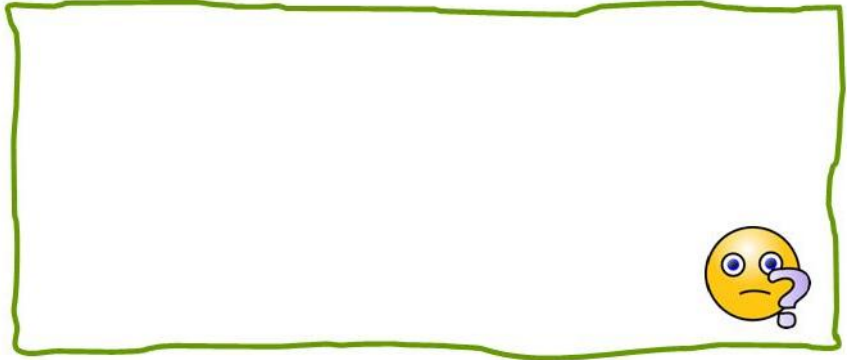
Toothpick Problem-solving

Problem #22

Move three triangles to make five triangles.

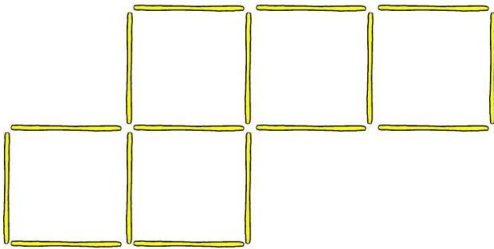


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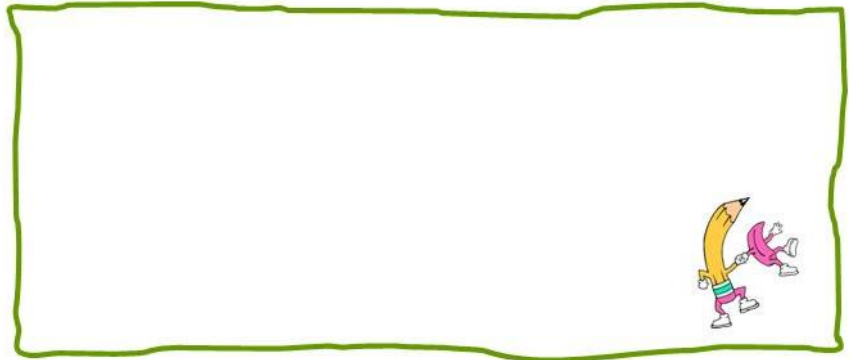


Problem #23

Move two toothpicks to leave four squares.

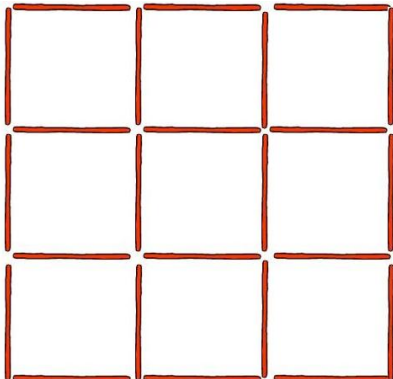


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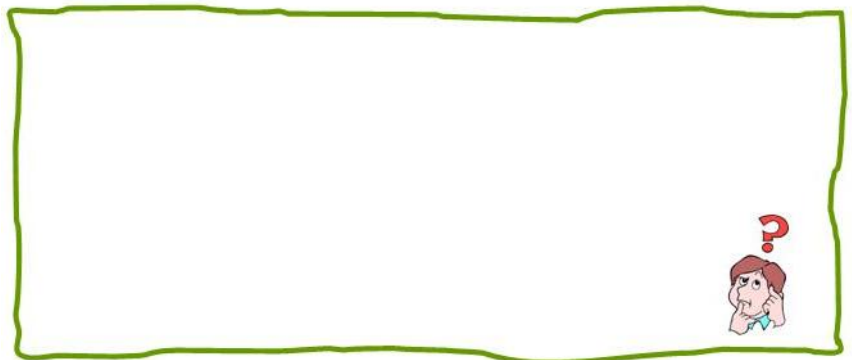


Problem #24

Remove six toothpicks to leave three squares.



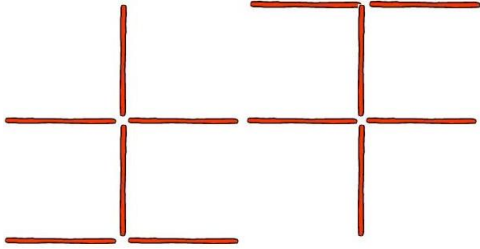
Your Solution



Toothpick Problem-solving

Problem #25

Move four toothpicks to leave five squares.

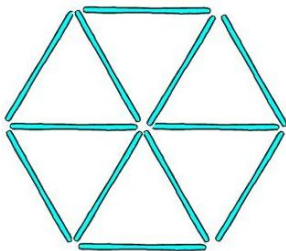


Your Solution

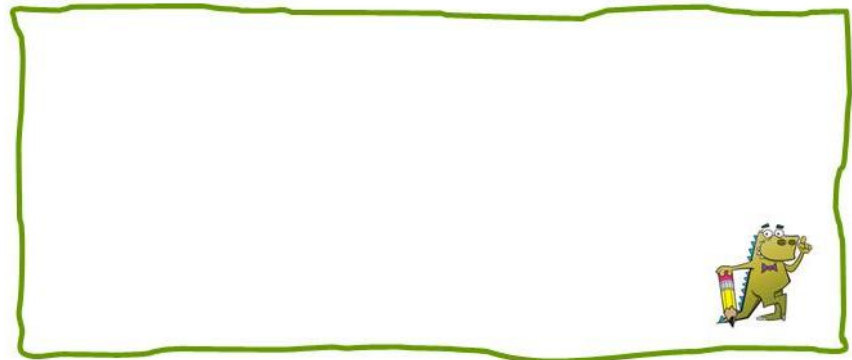


Problem #26

Remove three toothpicks to leave three triangles.

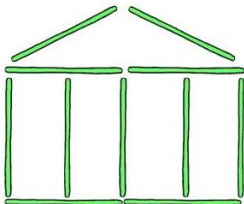


Your Solution

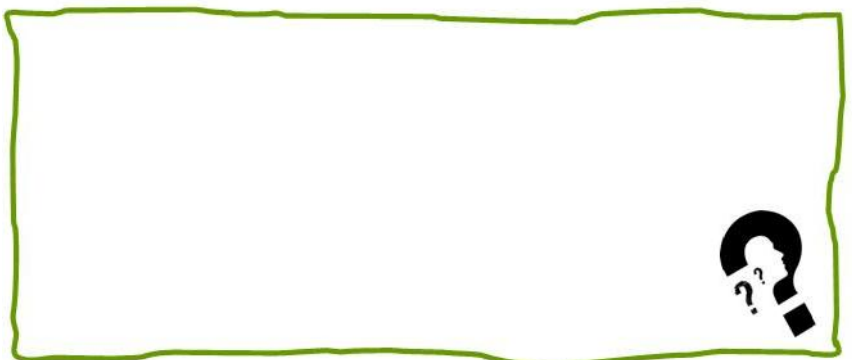


Problem #27

Add one toothpick to make seven squares.



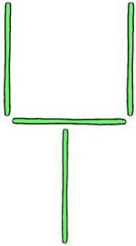
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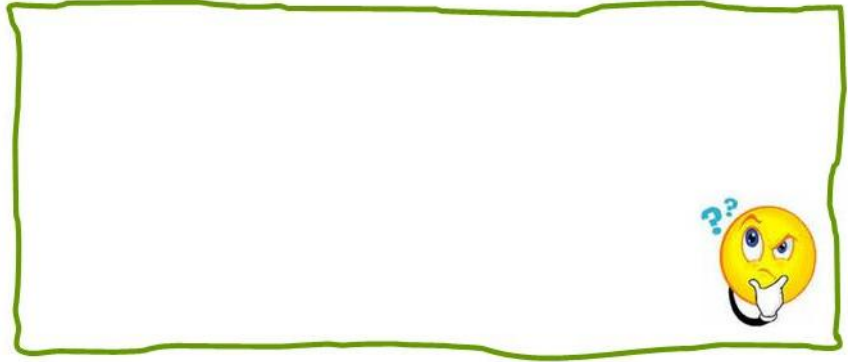
Toothpick Problem-solving

Problem #28

Move one toothpick to make a square.

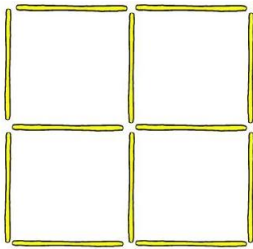


Your Solution



Problem #29

Move four toothpicks to make ten squares.

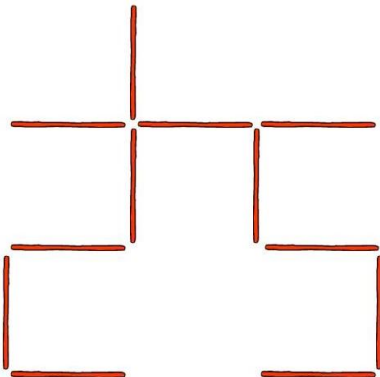


Your Solution

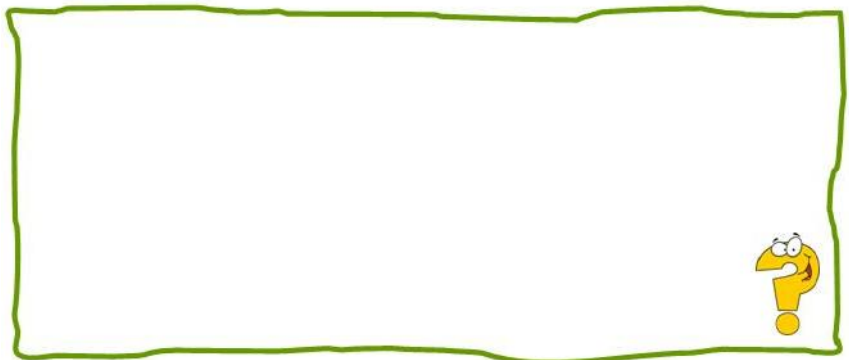


Problem #30

Move three toothpicks to leave three squares.



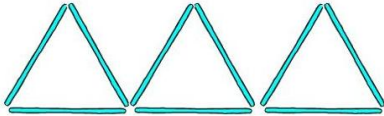
Your Solution



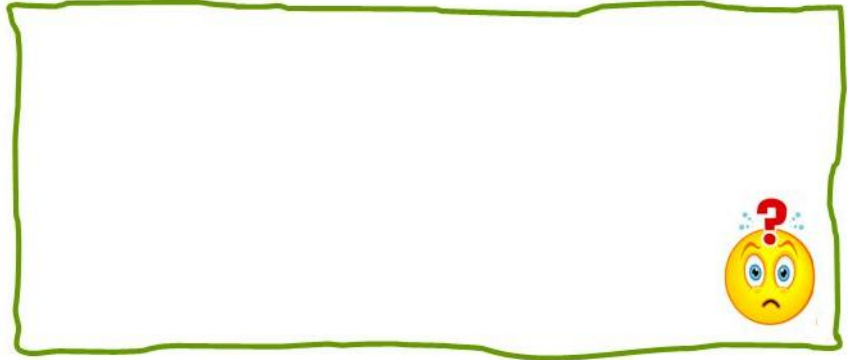
Toothpick Problem-solving

Problem #31

Move four triangles to make one triangle.

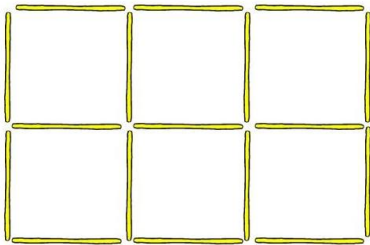


Your Solution

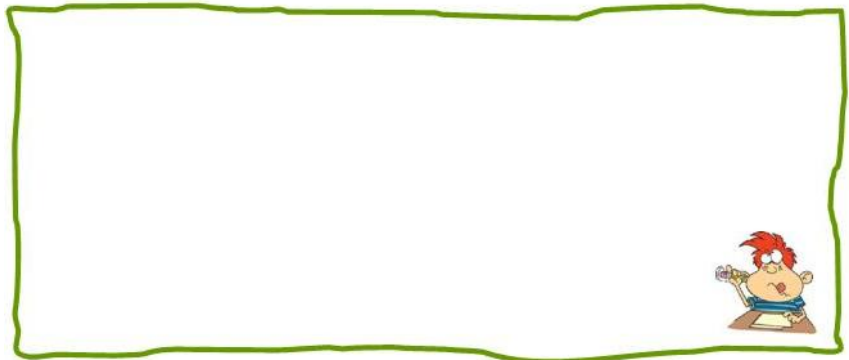


Problem #32

Remove four toothpicks to leave four squares.

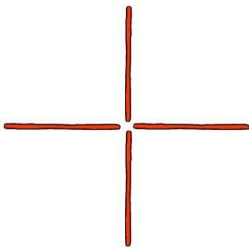


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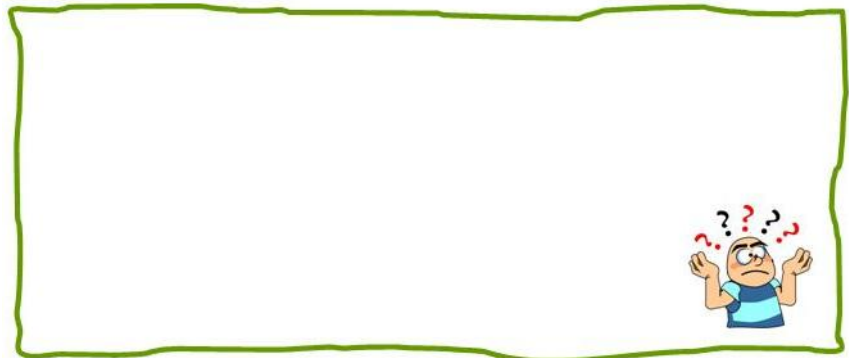


Problem #33

Move one toothpick to form an even number.



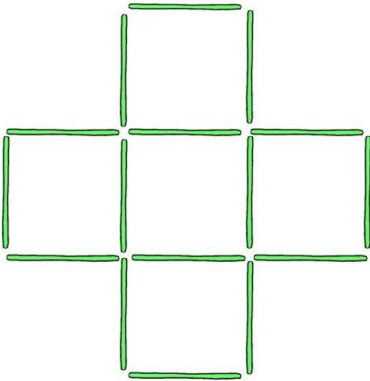
Your Solution



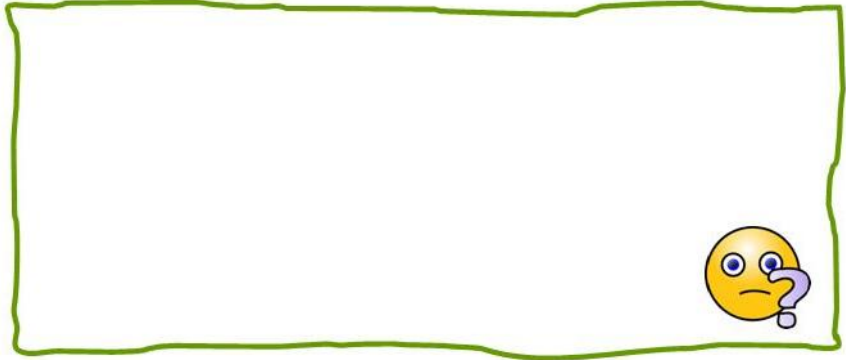
Toothpick Problem-solving

Problem #34

Move four toothpicks to make four squares.

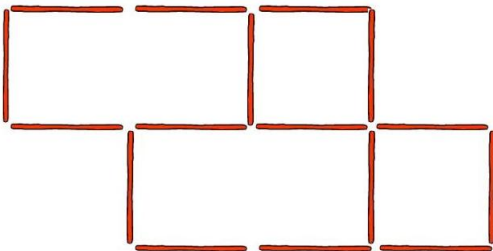


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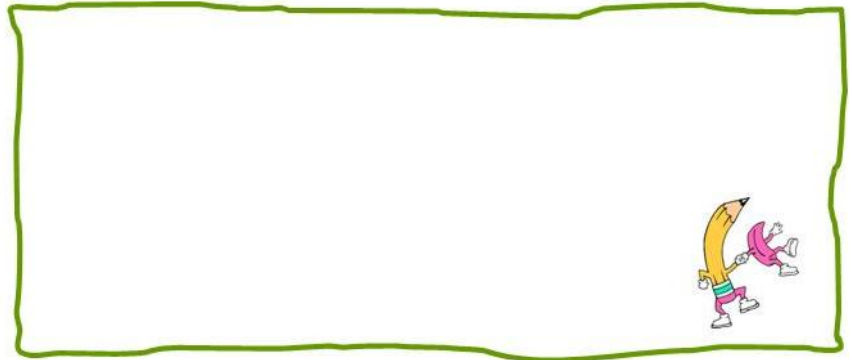


Problem #35

Move two toothpicks to leave four squares.

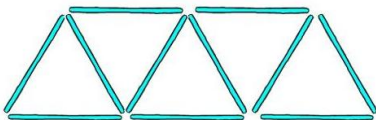


Your Solution

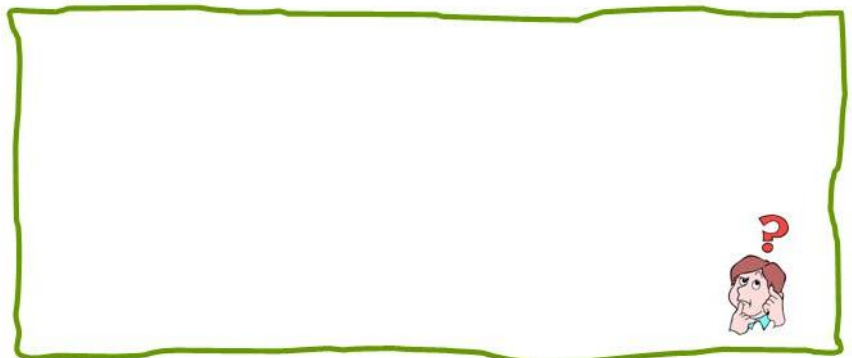


Problem #36

Move four toothpicks to make four triangles.



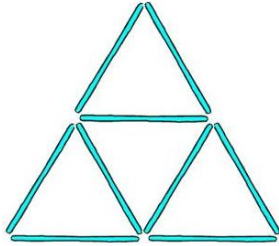
Your Solution



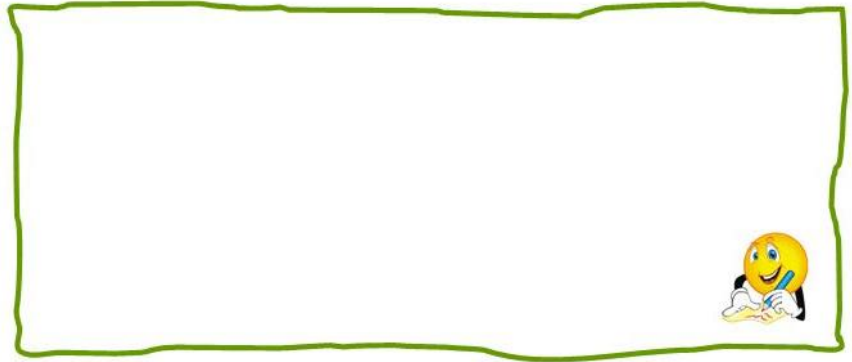
Toothpick Problem-solving

Problem #37

Remove two toothpicks to leave three triangles.

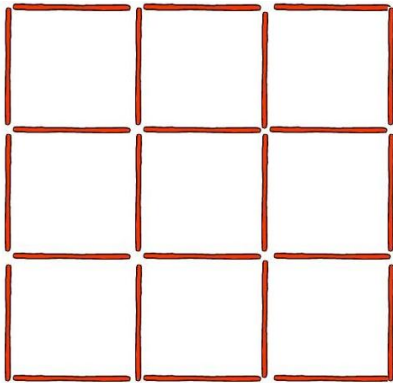


Your Solution

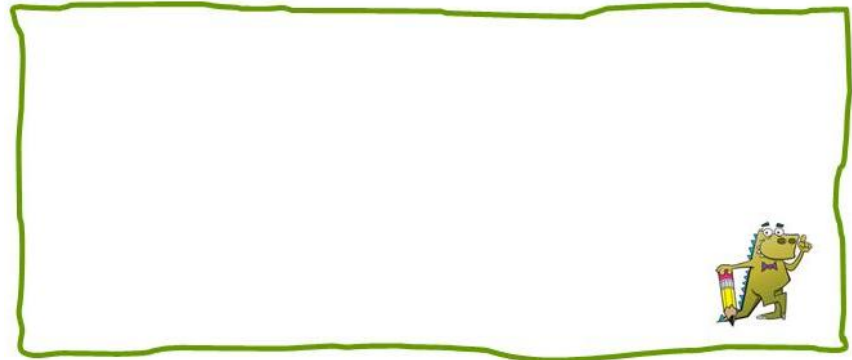


Problem #38

Remove eight toothpicks to leave four squares.

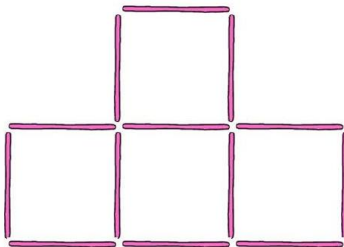


Your Solution

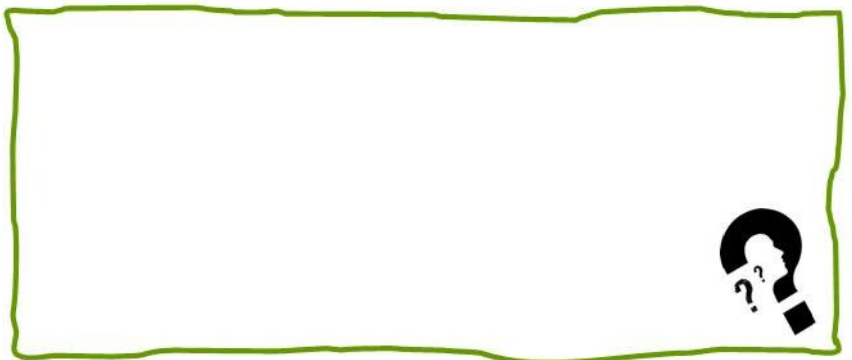


Problem #39

Add two toothpicks to make eight squares.



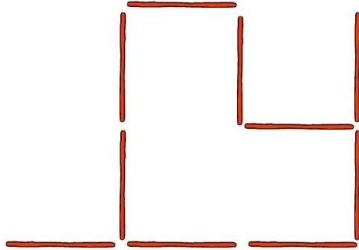
Your Solution



Toothpick Problem-solving

Problem #40

Move two toothpicks to leave three squares.

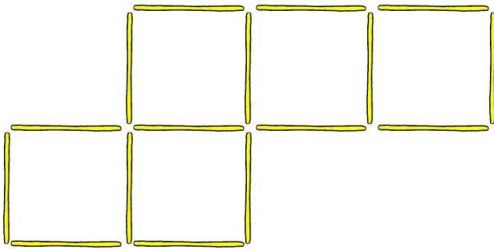


Your Solution



Problem #41

Add four toothpicks to make ten squares.

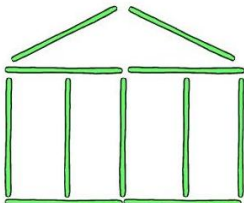


Your Solution



Problem #42

Remove five toothpicks to leave one pentagon.



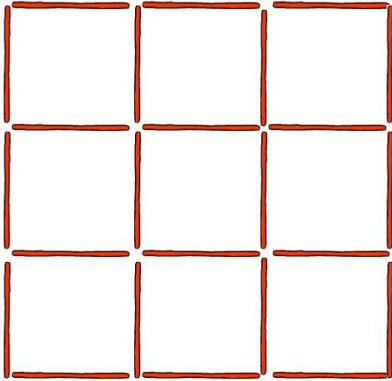
Your Solution



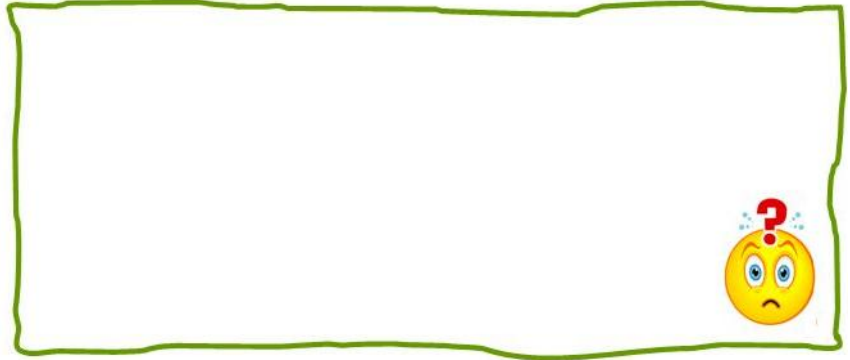
Toothpick Problem-solving

Problem #43

Remove eight toothpicks to leave three squares.

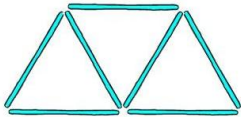


Your Solution

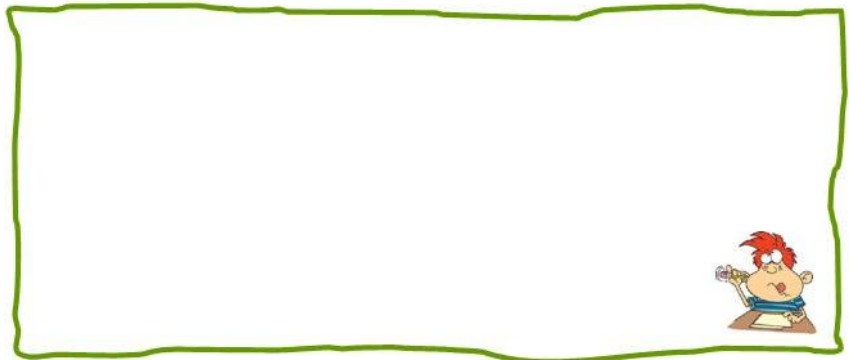


Problem #44

Remove one toothpick to make two triangles.

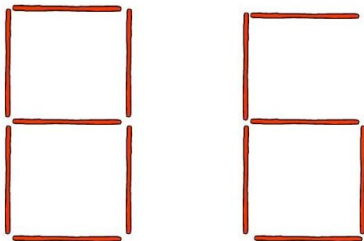


Your Solution



Problem #45

Move two toothpicks to make four squares.



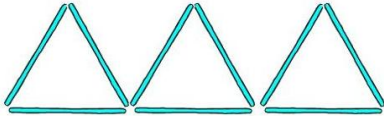
Your Solution



Toothpick Problem-solving

Problem #46

Add two toothpicks to make five triangles.

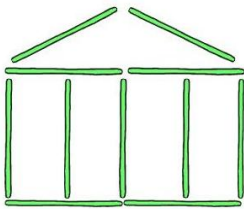


Your Solution



Problem #47

Move two toothpicks to make eleven squares.

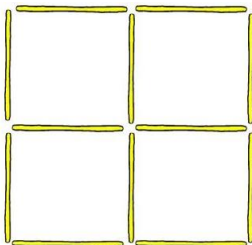


Your Solution



Problem #48

Remove two toothpicks to leave three squares.



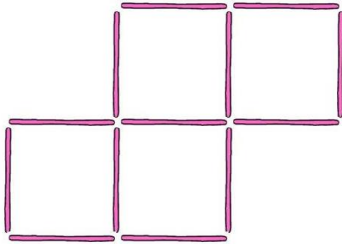
Your Solution



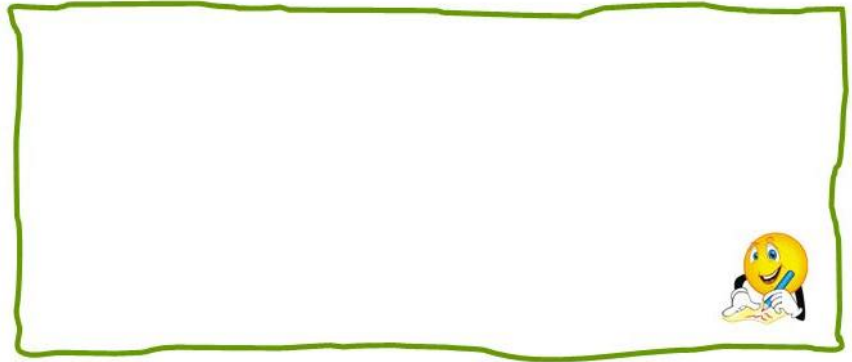
Toothpick Problem-solving

Problem #49

Move two toothpicks to make three squares.

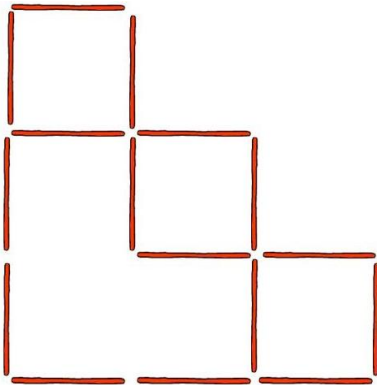


Your Solution

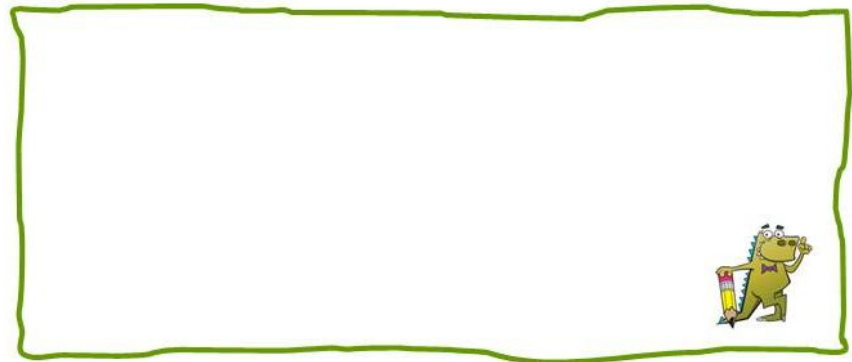


Problem #50

Move four toothpicks to leave three squares.

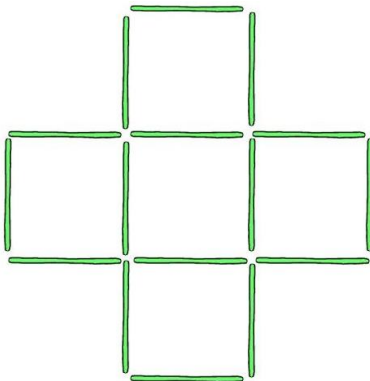


Your Solution



Problem #51

Move two toothpicks to make four squares.



Your Solution



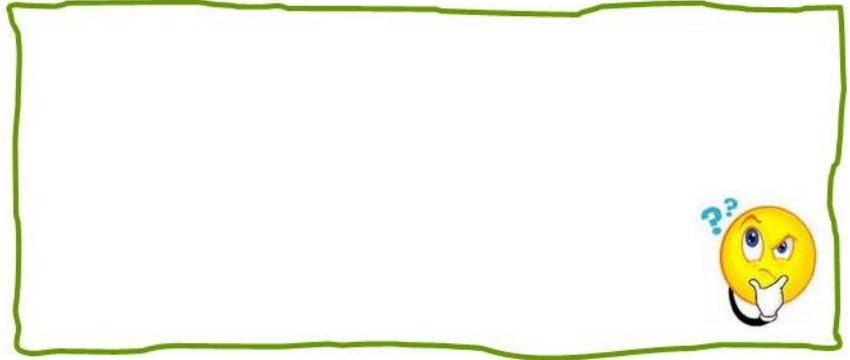
Toothpick Problem-solving

Problem #52

Add five toothpicks to make NINE.

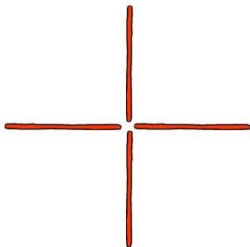


Your Solution



Problem #53

Add eight toothpicks to make five squares.

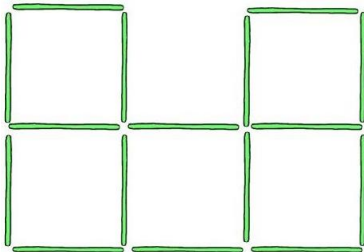


Your Solution

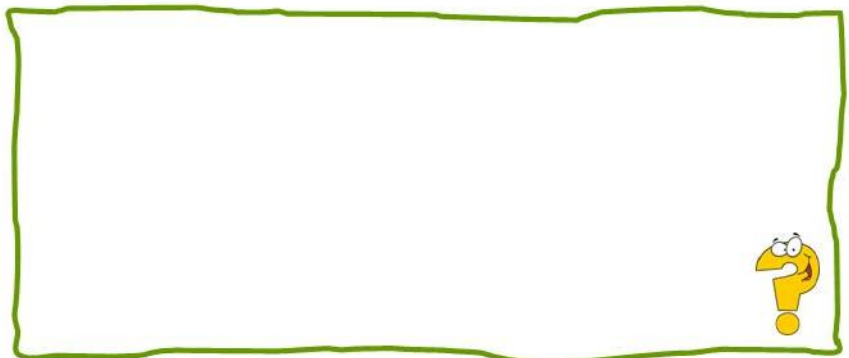


Problem #54

Remove four toothpicks to leave three squares.



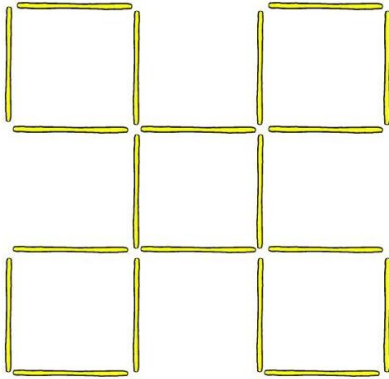
Your Solution



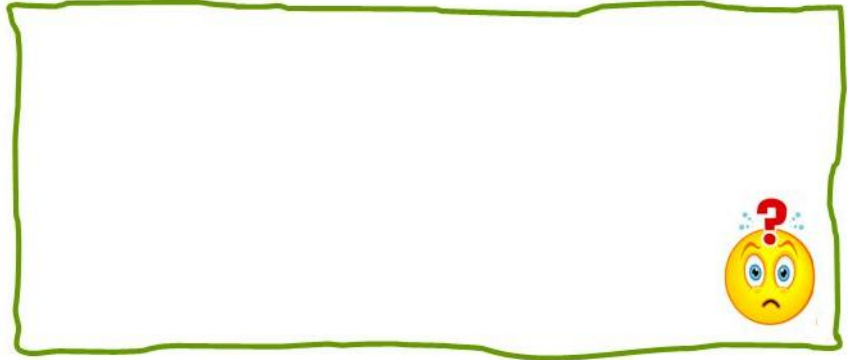
Toothpick Problem-solving

Problem #55

Add four toothpicks to make thirteen squares.

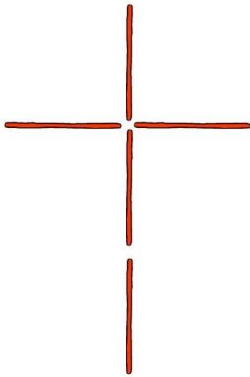


Your Solution

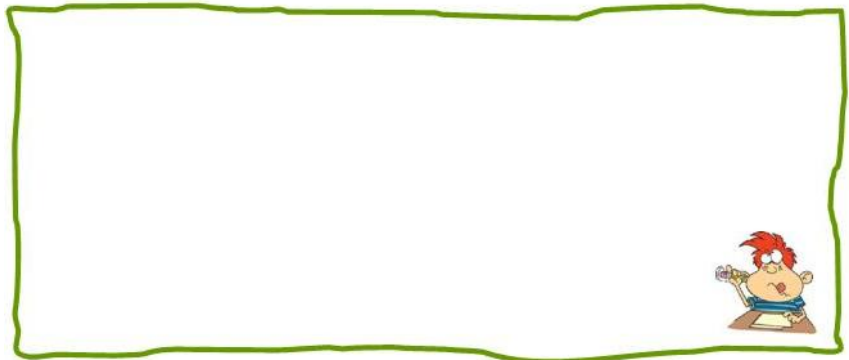


Problem #56

Move two toothpicks to make three triangles.

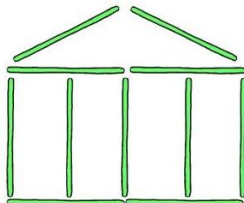


Your Solution



Problem #57

Remove four toothpicks to leave two squares.



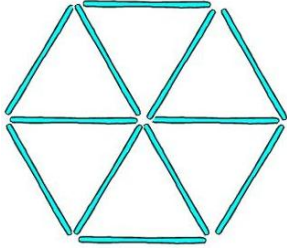
Your Solution



Toothpick Problem-solving

Problem #58

Remove three toothpicks to leave three rhombi.

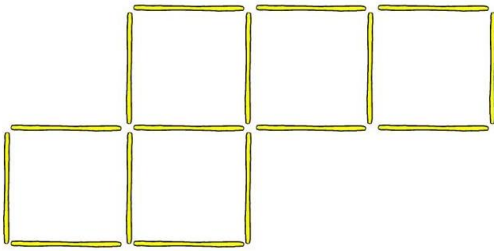


Your Solution



Problem #59

Remove five toothpicks to leave three squares.

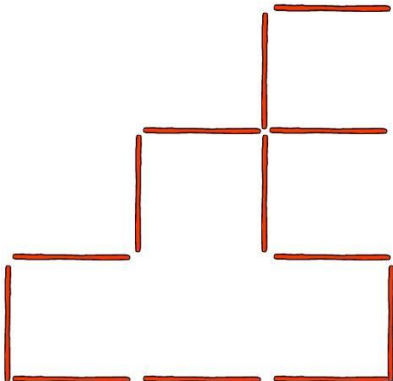


Your Solution



Problem #60

Move three toothpicks to leave four squares.



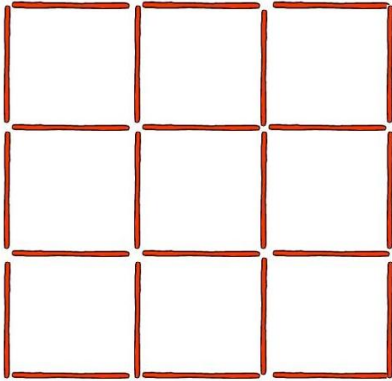
Your Solution



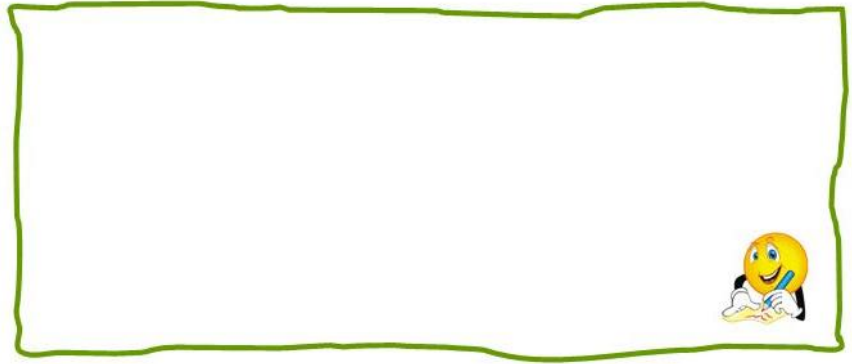
Toothpick Problem-solving

Problem #61

Remove eight toothpicks to leave two squares.

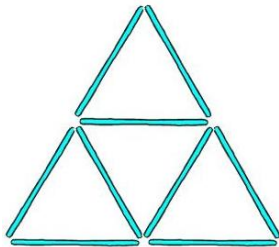


Your Solution

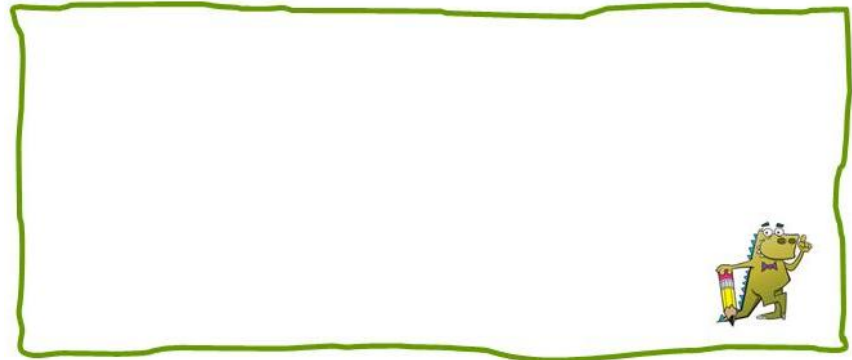


Problem #62

Remove four toothpicks to leave two triangles.

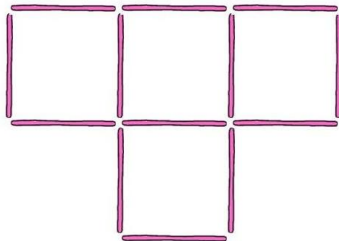


Your Solution

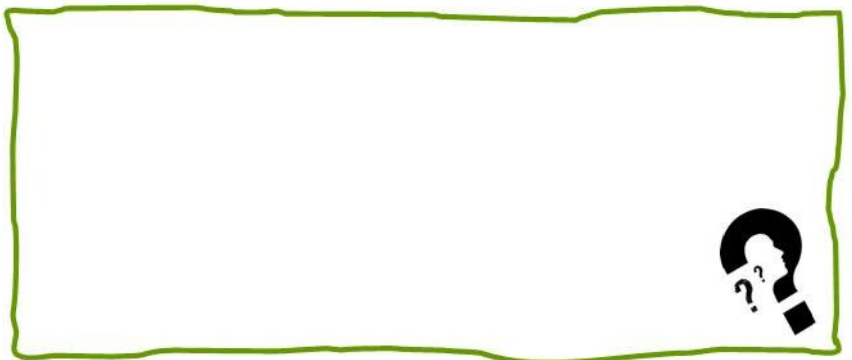


Problem #63

Add three toothpicks to make a letter of the alphabet.



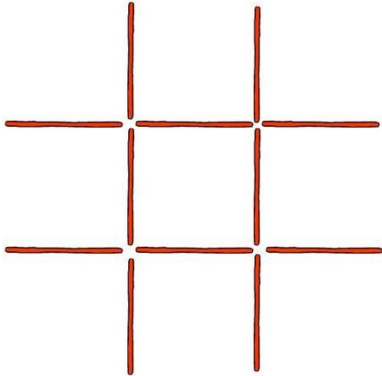
Your Solution



Toothpick Problem-solving

Problem #64

Add four toothpicks to make five squares.

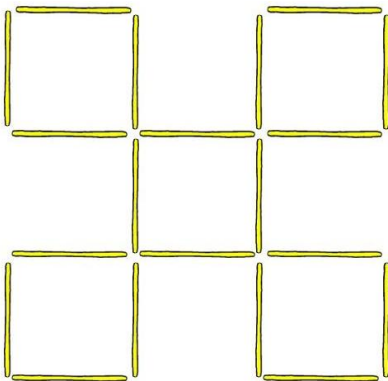


Your Solution



Problem #65

Add four toothpicks to make nine single squares.

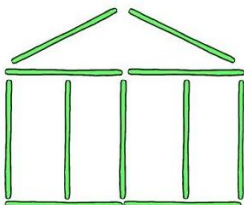


Your Solution

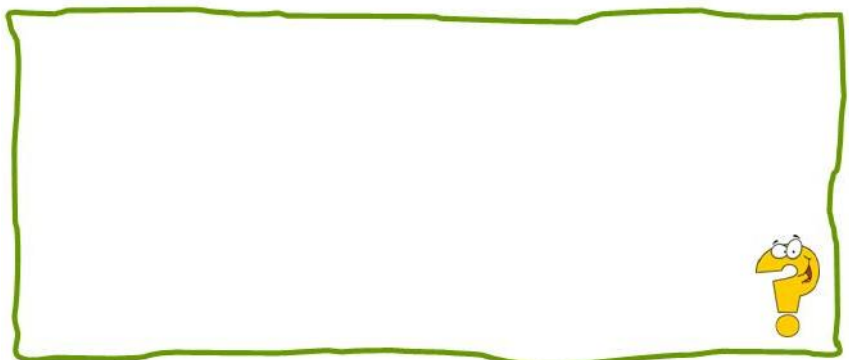


Problem #66

Remove two toothpicks to make three squares.



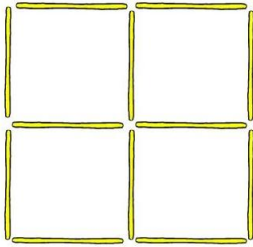
Your Solution



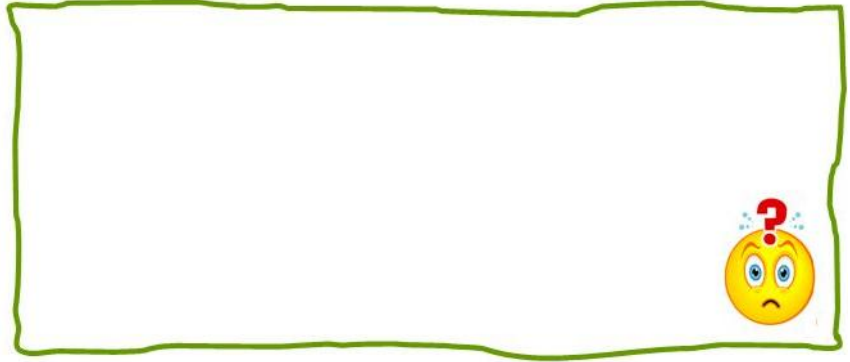
Toothpick Problem-solving

Problem #67

Add two toothpicks to make nine squares.

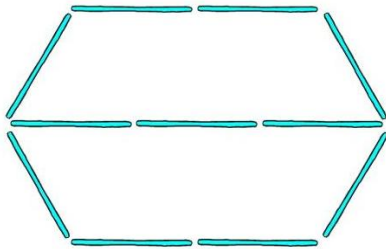


Your Solution

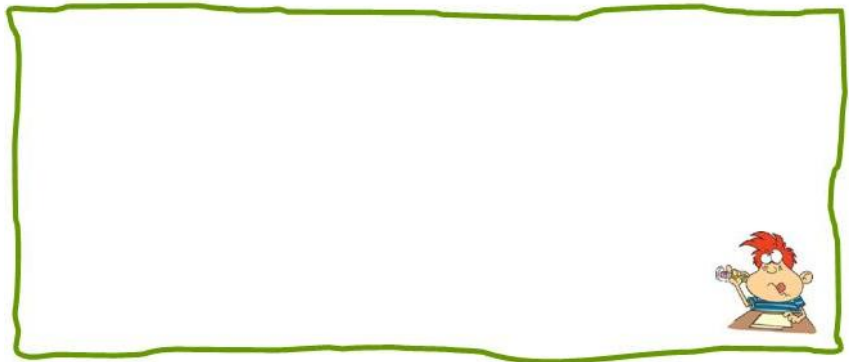


Problem #68

Add eight toothpicks to make ten little triangles.

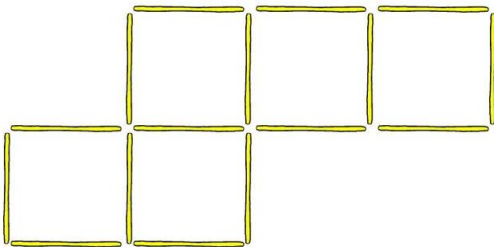


Your Solution

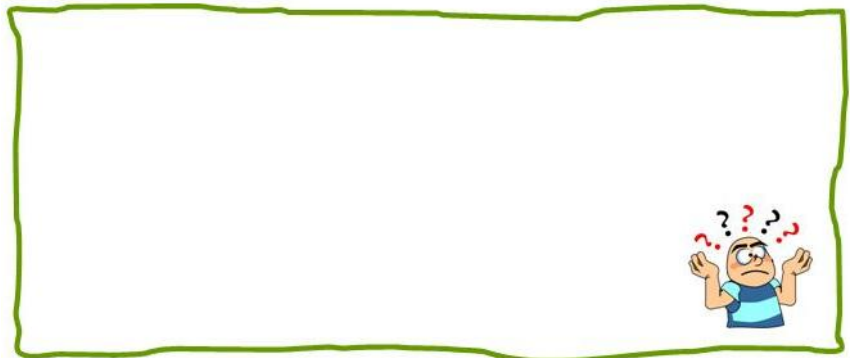


Problem #69

Remove two toothpicks to leave four squares..



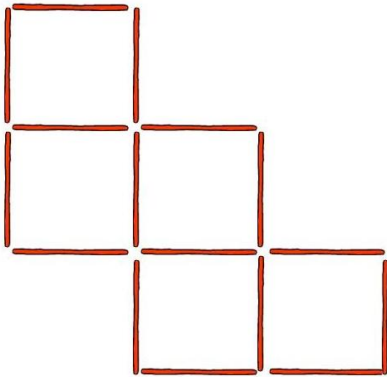
Your Solution



Toothpick Problem-solving

Problem #70

Move two toothpicks to leave four squares.

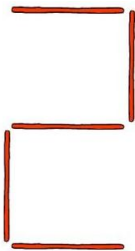


Your Solution



Problem #71

Move two toothpicks to get three more.

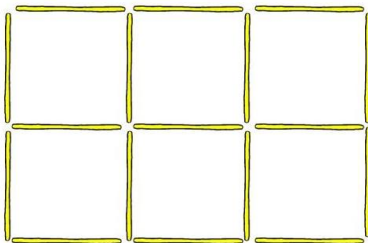


Your Solution



Problem #72

Add two toothpicks to make twelve squares.



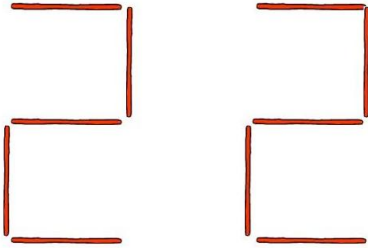
Your Solution



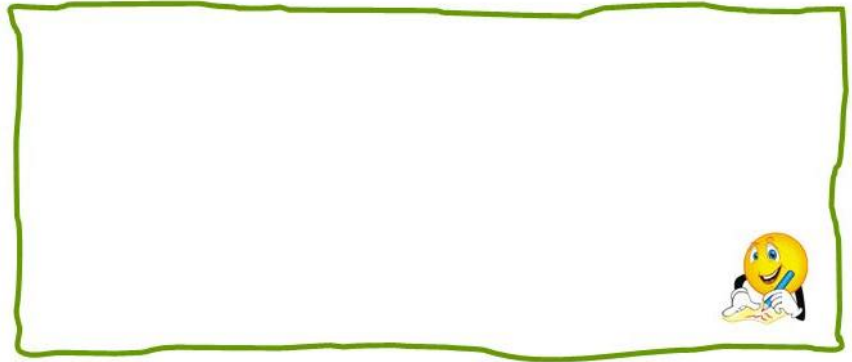
Toothpick Problem-solving

Problem #73

Move four toothpicks to make three squares.

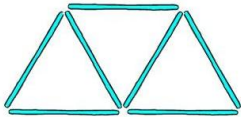


Your Solution

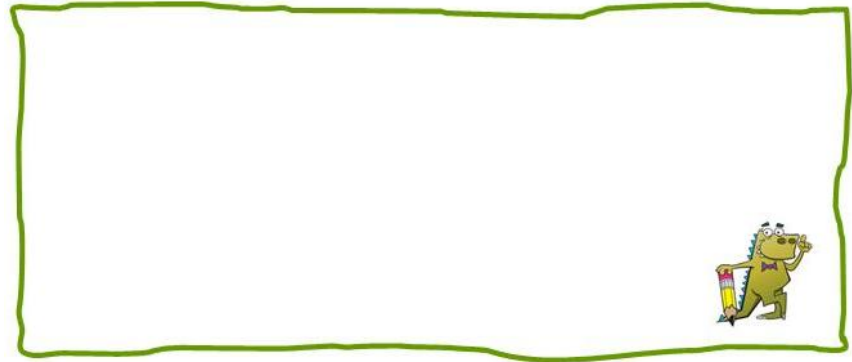


Problem #74

Add two toothpicks to make five triangles.

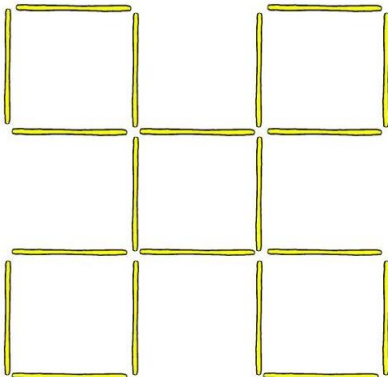


Your Solution

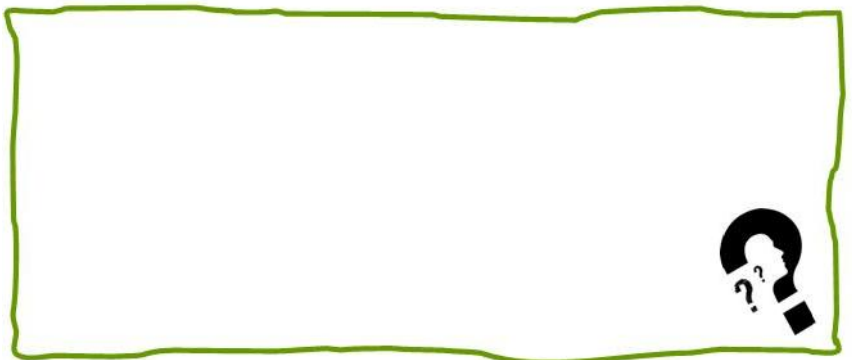


Problem #75

Add four toothpicks to make fourteen squares.



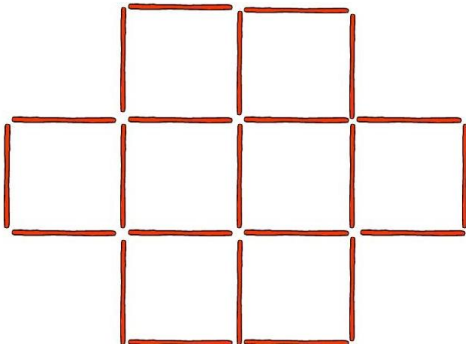
Your Solution



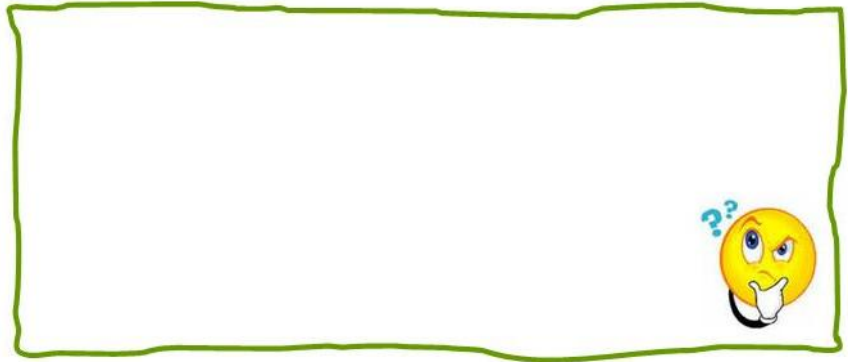
Toothpick Problem-solving

Problem #76

Remove four toothpicks to leave four rectangles.

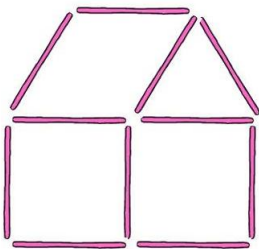


Your Solution

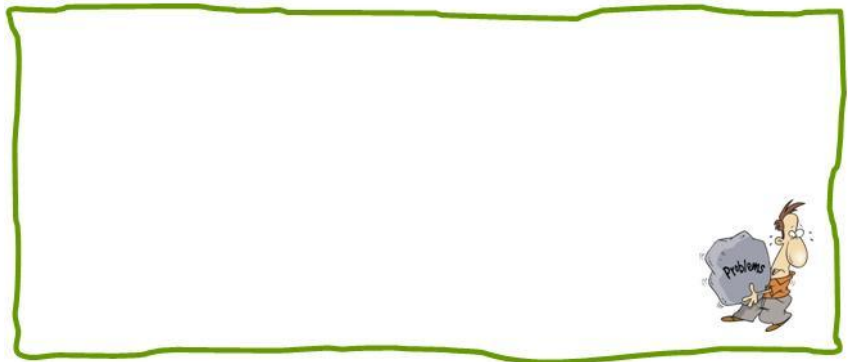


Problem #77

Move two toothpicks to make the house face the other direction.

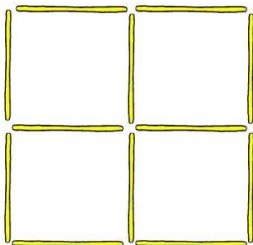


Your Solution

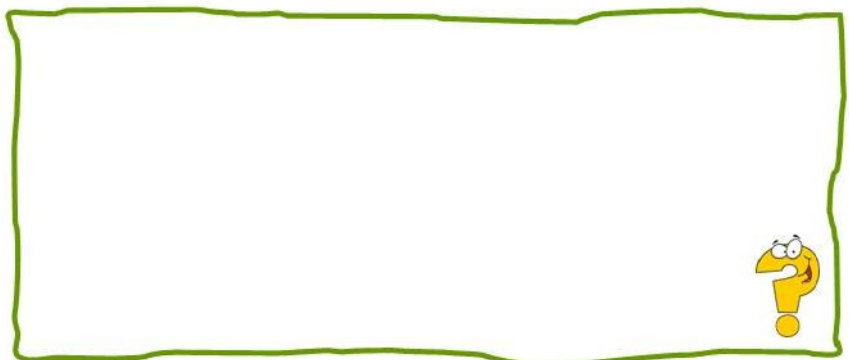


Problem #78

Move four toothpicks to make three squares.



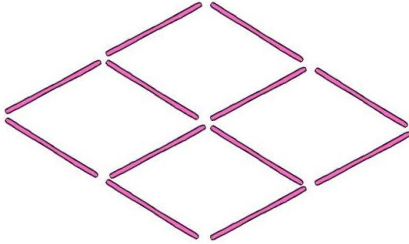
Your Solution



Toothpick Problem-solving

Problem #79

Add four toothpicks to make ten triangles.

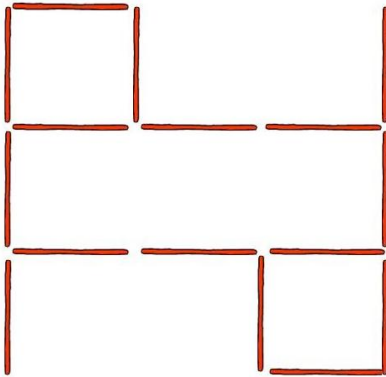


Your Solution



Problem #80

Move two toothpicks to leave five squares.

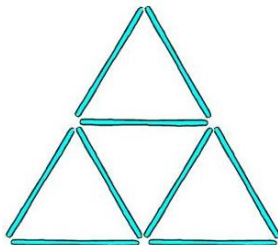


Your Solution



Problem #81

Remove three toothpicks to leave one triangle.



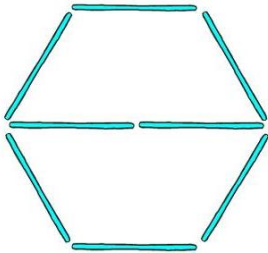
Your Solution



Toothpick Problem-solving

Problem #82

Add four toothpicks to make six triangles.

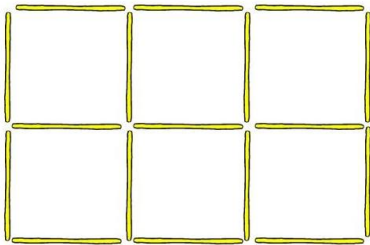


Your Solution



Problem #83

Remove six toothpicks to make two squares.

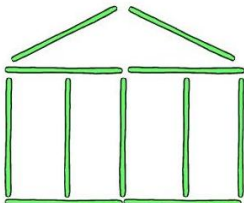


Your Solution



Problem #84

Remove two toothpicks AND move one toothpick to make six squares.



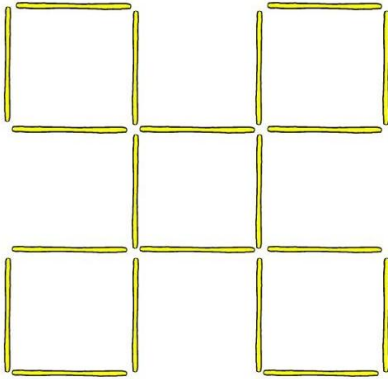
Your Solution



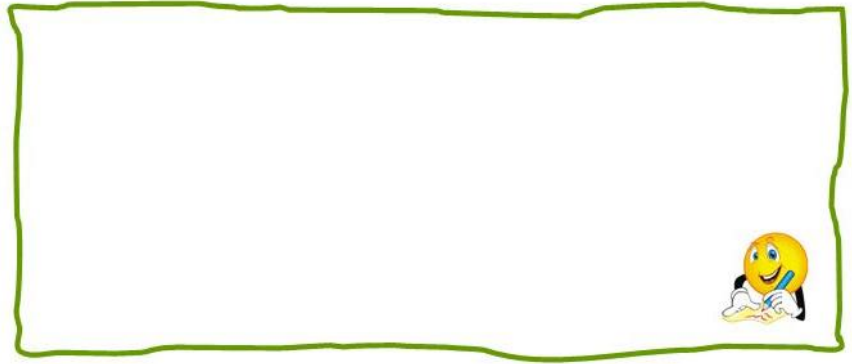
Toothpick Problem-solving

Problem #85

Add eight toothpicks to make twenty-one squares

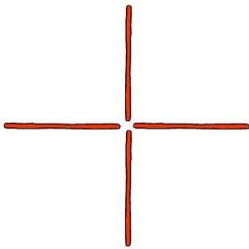


Your Solution



Problem #86

Remove three toothpicks to form the opposite.

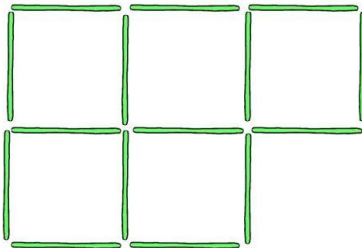


Your Solution

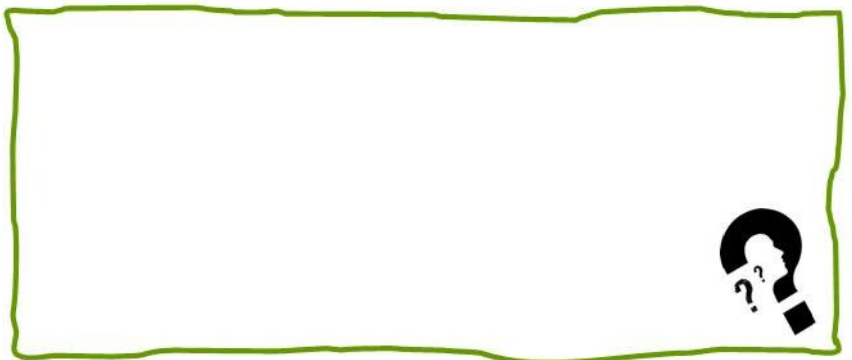


Problem #87

Remove three toothpicks to make three squares.



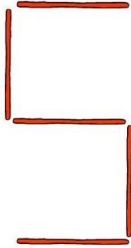
Your Solution



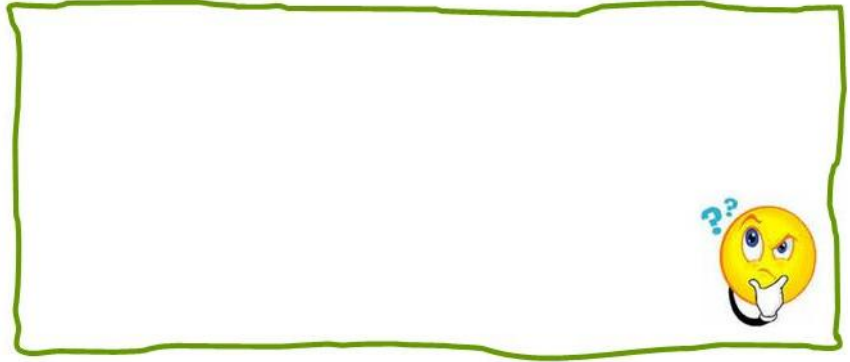
Toothpick Problem-solving

Problem #88

Add one toothpick to make this one more.

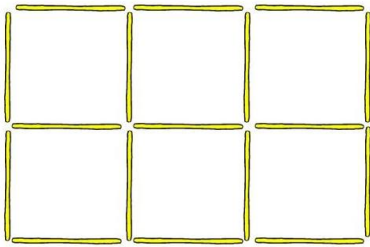


Your Solution

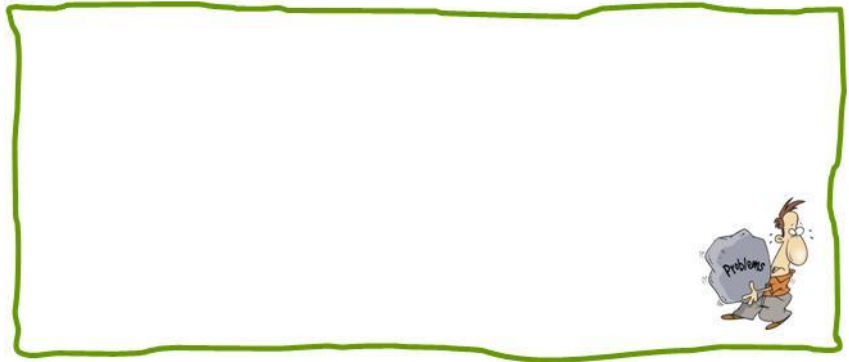


Problem #89

Move two toothpicks to make nine squares.

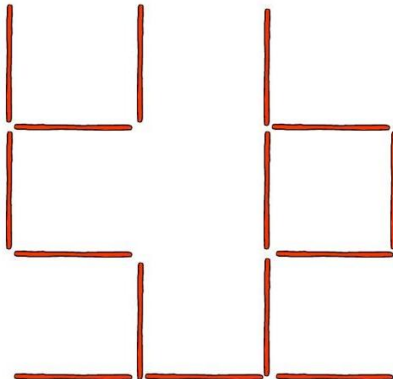


Your Solution

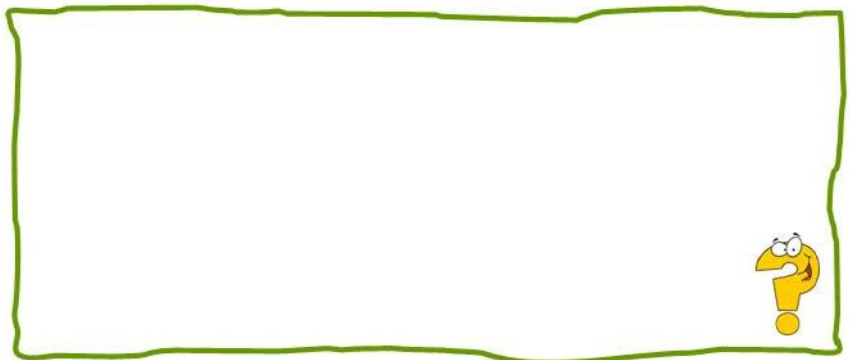


Problem #90

Move three toothpicks to leave four squares.



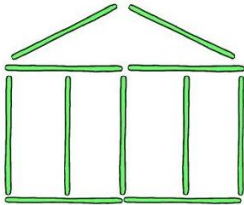
Your Solution



Toothpick Problem-solving

Problem #91

Move four toothpicks to make five squares.

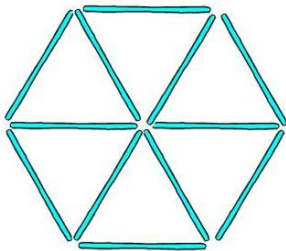


Your Solution



Problem #92

Move four toothpicks to make three triangles.

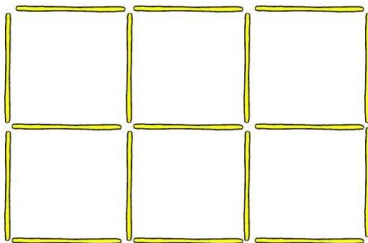


Your Solution



Problem #93

Remove five toothpicks to make three squares.



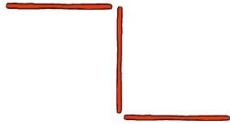
Your Solution



Toothpick Problem-solving

Problem #94

Move two toothpicks to make a triangle.

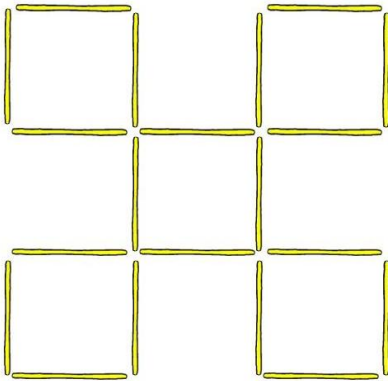


Your Solution



Problem #95

Remove four toothpicks to make four squares.

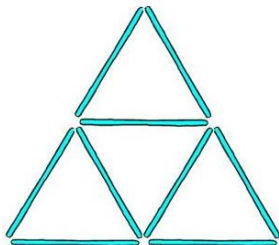


Your Solution



Problem #96

Remove six toothpicks to leave one triangle.



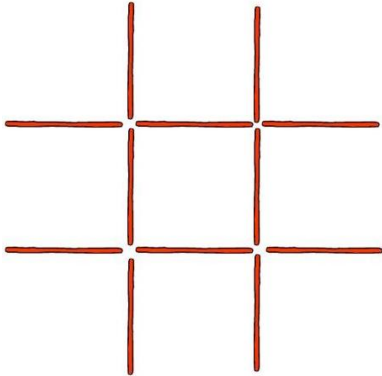
Your Solution



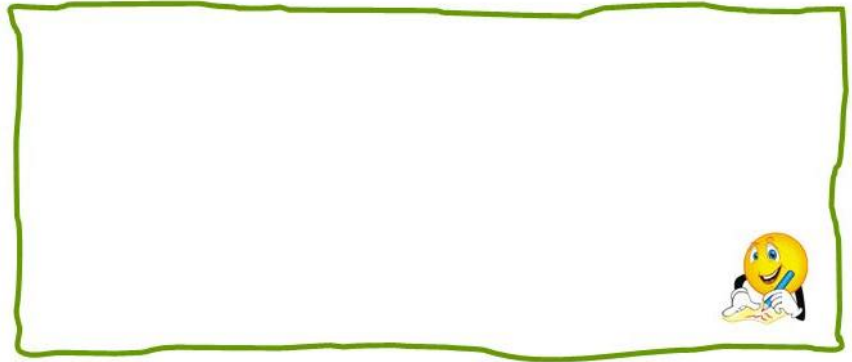
Toothpick Problem-solving

Problem #97

Move four toothpicks to make three squares.

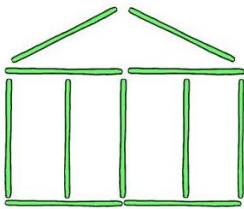


Your Solution

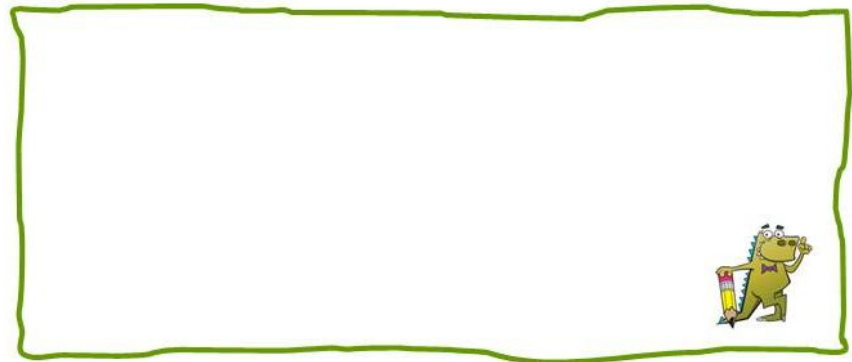


Problem #98

Remove five toothpicks AND move two toothpicks to make one hexagon.

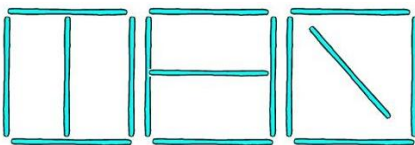


Your Solution

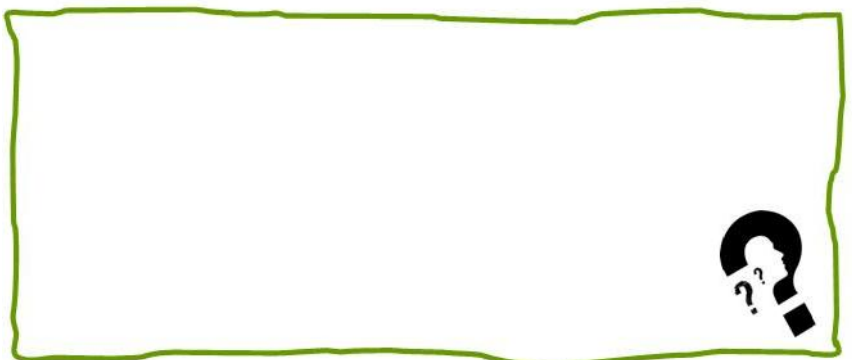


Problem #99

Remove six toothpicks to make TEN.

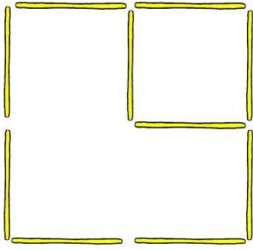


Your Solution

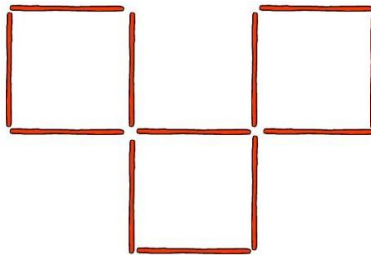


Solutions

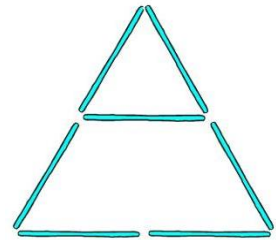
Problem #1



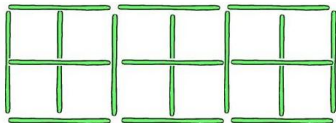
Problem #2



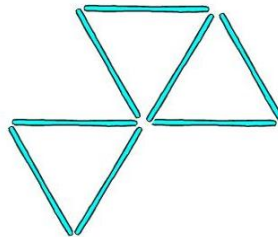
Problem #3



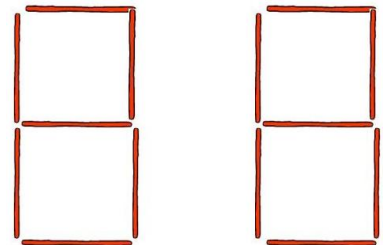
Problem #4



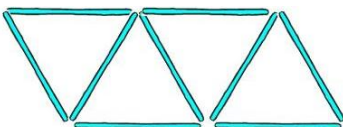
Problem #5



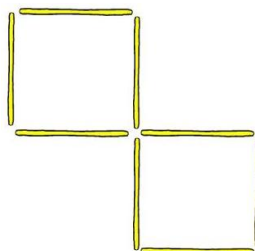
Problem #6



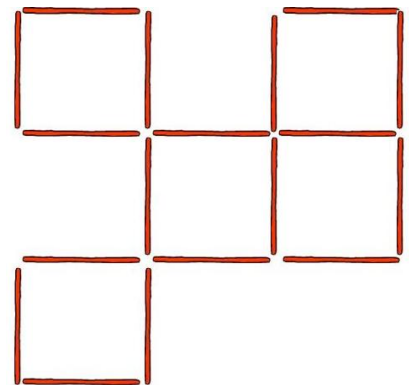
Problem #7



Problem #8

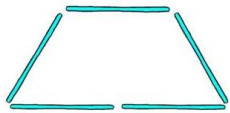


Problem #9

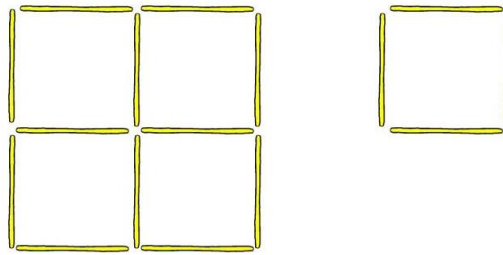


- 1: One large square and one little square.
3: One large triangle and one little triangle.
4: Four micro squares ($\frac{1}{4}$ of a little square) inside each little square.

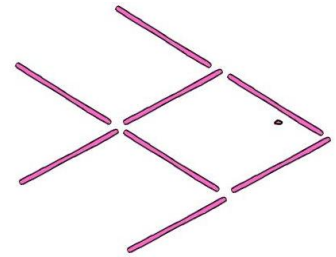
Problem #10



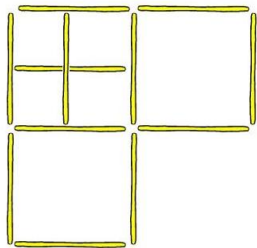
Problem #11



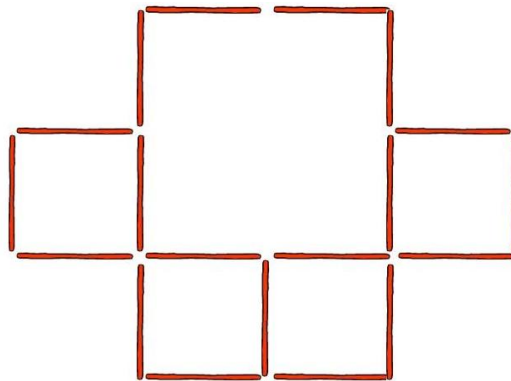
Problem #12



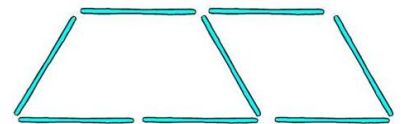
Problem #13



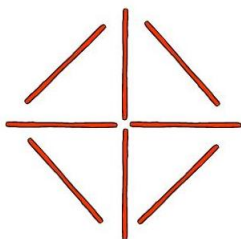
Problem #14



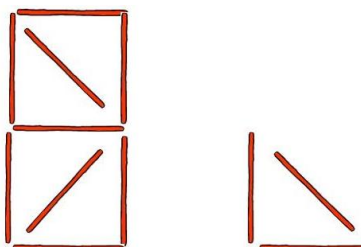
Problem #15



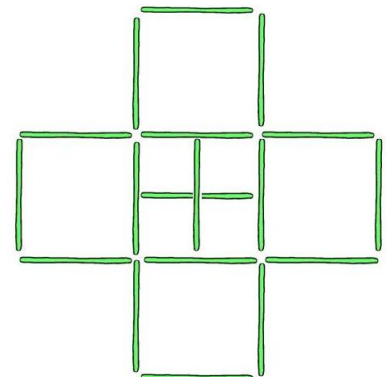
Problem #16



Problem #17

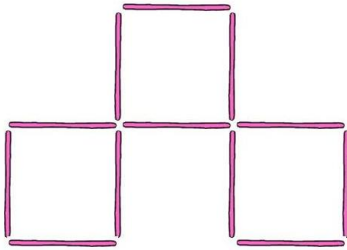


Problem #18

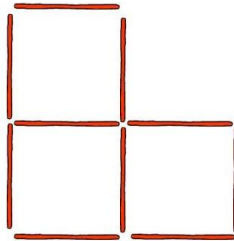


- 11: Five little squares and one large square (composed of four little squares)
12: This is possible. Honestly.
13: Three little squares and four micro squares (inside one little square).
16: Four little triangles and four large triangles (each composed of two little triangles).
17: Five little triangles and one large triangle (composed of two little triangles).
18: Five little squares and four micro squares (inside one little square).

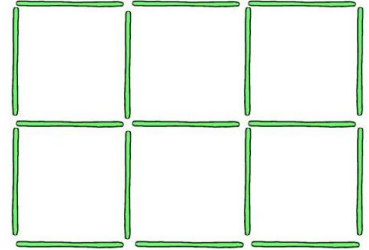
Problem #19



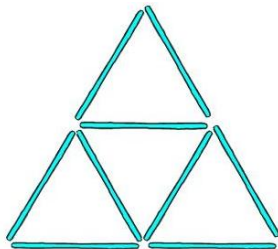
Problem #20



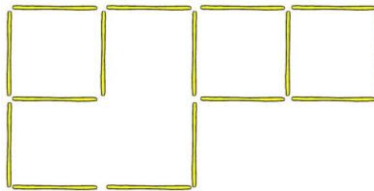
Problem #21



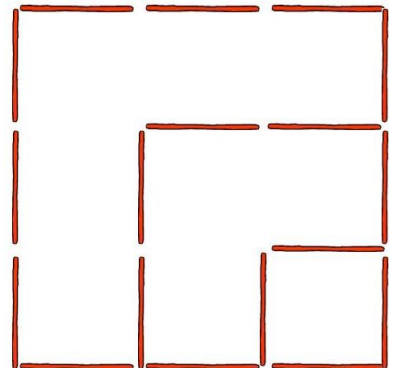
Problem #22



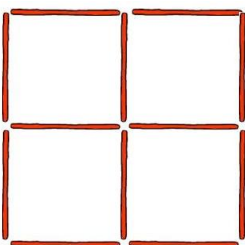
Problem #23



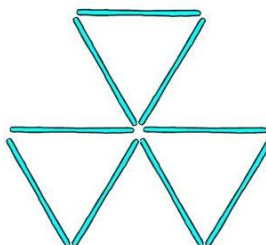
Problem #24



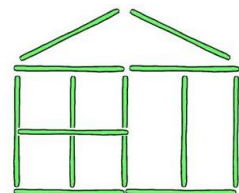
Problem #25



Problem #26

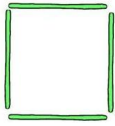


Problem #27

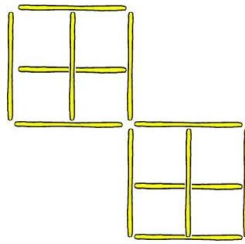


- 21: Six little squares and two large squares (composed of four little squares each).
- 22: Four little triangles and one large triangle (composed of four little triangles).
- 23: Three little squares and one large square.
- 24: One little square; one medium square; one large square (outside edges).
- 25: Four little squares and one large square (composed of four little squares).
- 27: Three little squares (composed of two rectangles each) and four micro squares (inside one little square).

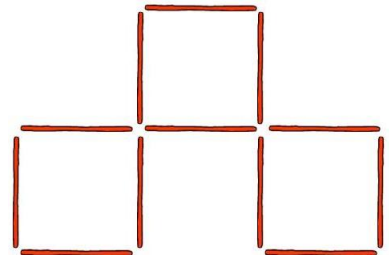
Problem #28



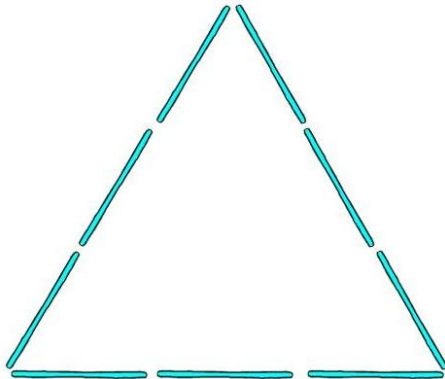
Problem #29



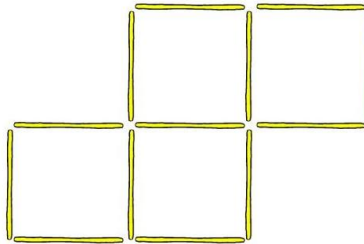
Problem #30



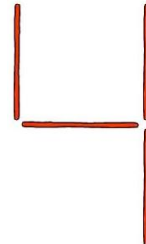
Problem #31



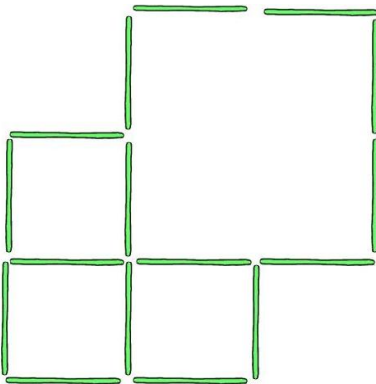
Problem #32



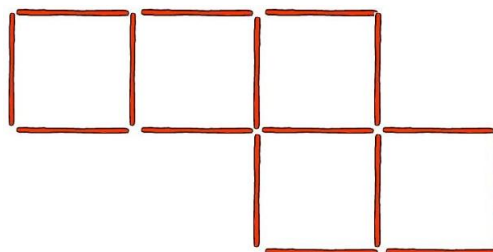
Problem #33



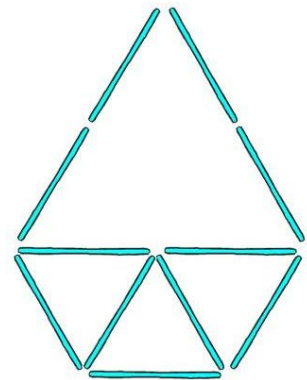
Problem #34



Problem #35

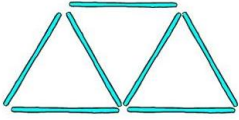


Problem #36

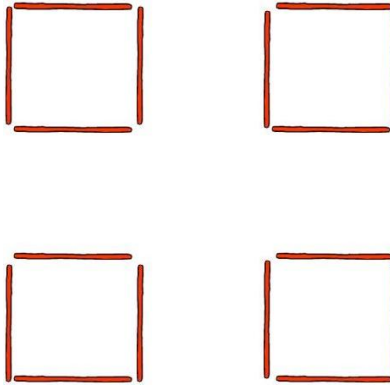


- 29: Two little squares and eight micro squares (four inside each of two little squares).
- 33: Four (4) is an even number.
- 34: Three little squares and one large square.
- 36: Three little triangles and one large triangle.

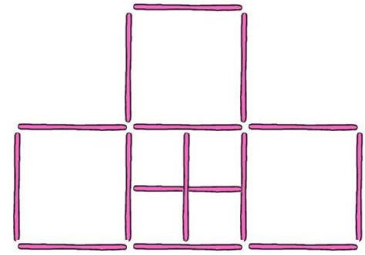
Problem #37



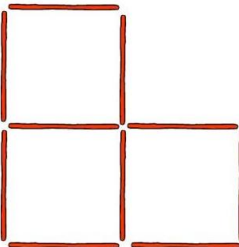
Problem #38



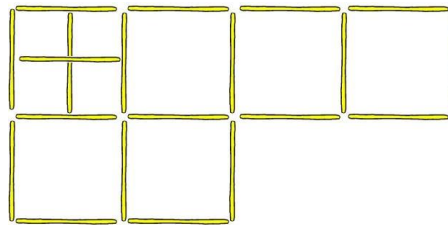
Problem #39



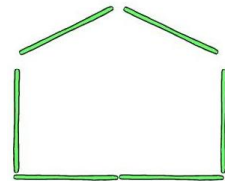
Problem #40



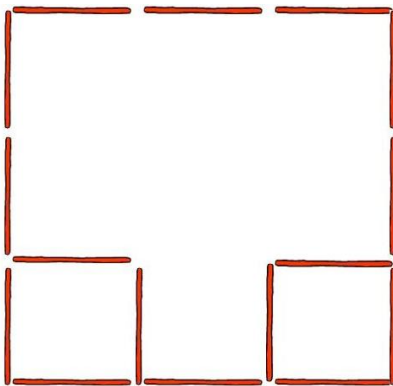
Problem #41



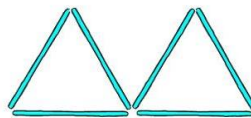
Problem #42



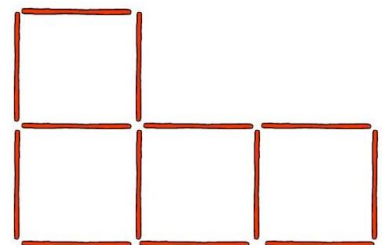
Problem #43



Problem #44

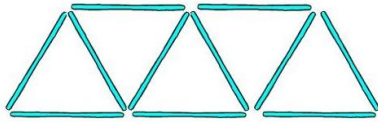


Problem #45

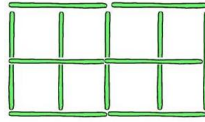


- 39: Four little squares and four micro squares (inside one little square).
41: Six little squares and four micro squares (inside one little square).
43: Two little squares and one large square (on the outside edges).

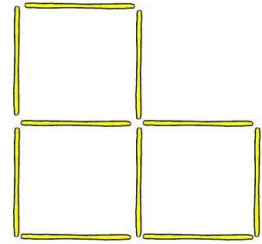
Problem #46



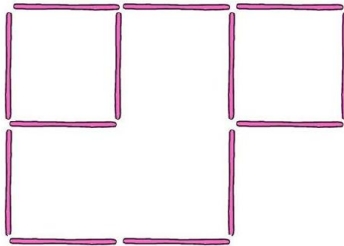
Problem #47



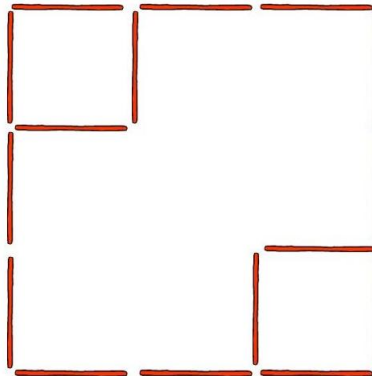
Problem #48



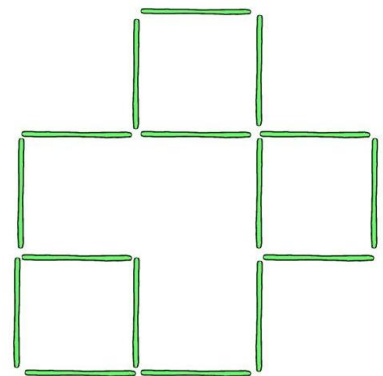
Problem #49



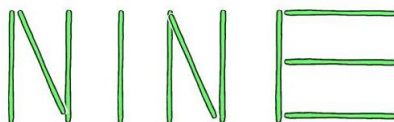
Problem #50



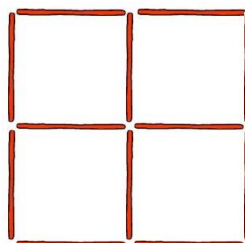
Problem #51



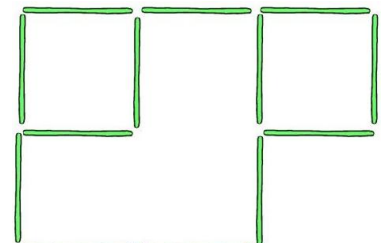
Problem #52



Problem #53

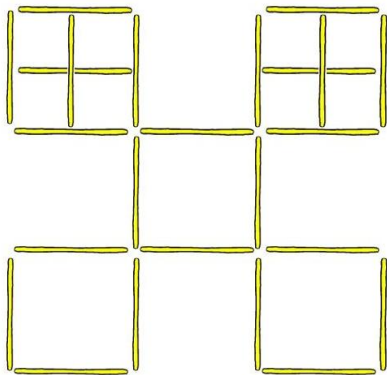


Problem #54

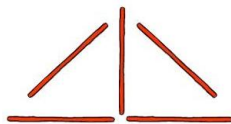


- 47: Three little squares (each composed of four micro squares) and eight micro squares.
50: Two little squares and one large square (on the outside edges).
51: Three little squares and one large square.
53: Four little squares and one large square (composed of four little squares).
54: Two little squares and one large square.

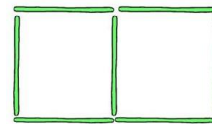
Problem #55



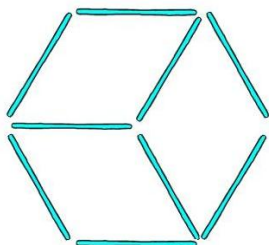
Problem #56



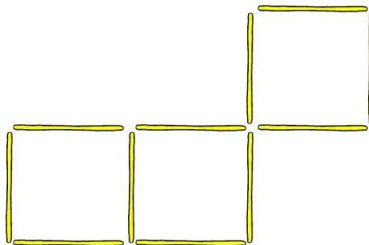
Problem #57



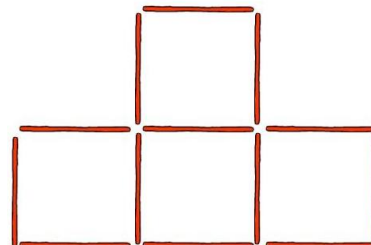
Problem #58



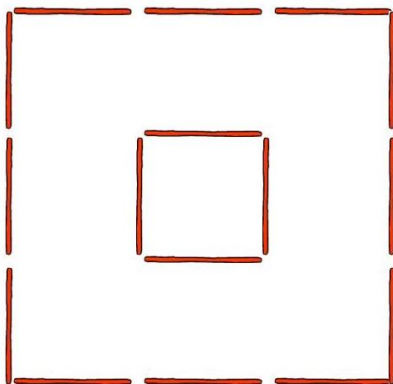
Problem #59



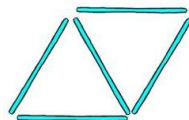
Problem #60



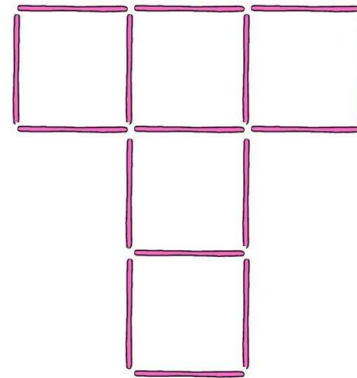
Problem #61



Problem #62

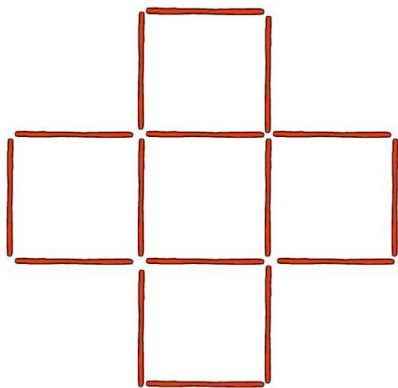


Problem #63

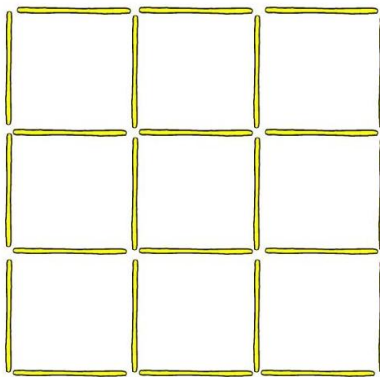


- 55: Five little squares and eight micro squares (four inside the upper two little squares).
56: Two little triangles and one large triangle (composed of two little triangles).

Problem #64



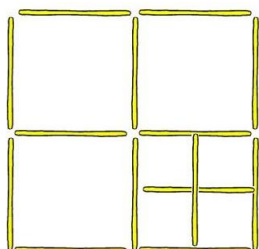
Problem #65



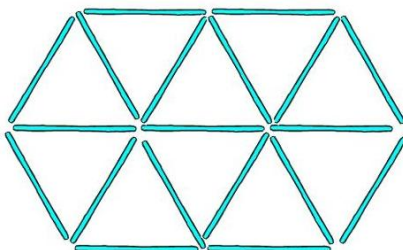
Problem #66



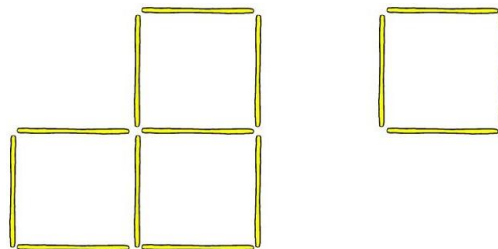
Problem #67



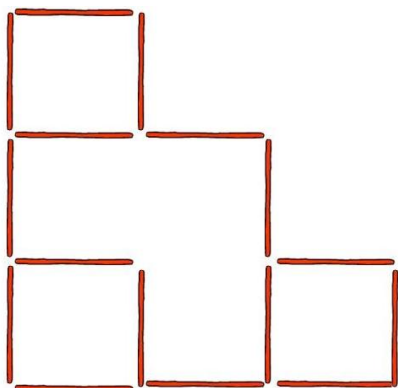
Problem #68



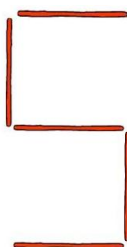
Problem #69



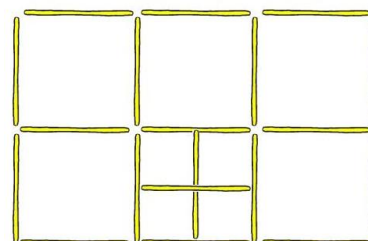
Problem #70



Problem #71

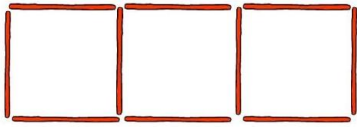


Problem #72

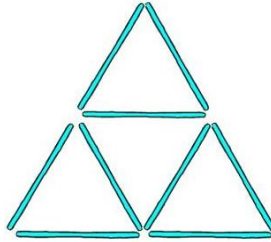


- 65: "Little" is the key term. There are nine little squares.
- 66: Three little squares (composed of two rectangles each).
- 67: Four little squares and four micro squares (inside one little square).
- 68: "Little" is the key word here. There are now ten little triangles.
- 71: "Three more" than two is five (5). $3+2=5$.
- 72: Six little squares; four micro squares; two large squares (each composed of four little squares).

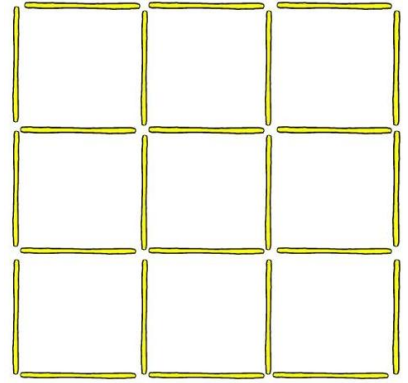
Problem #73



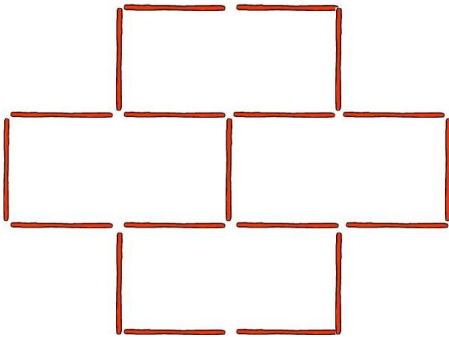
Problem #74



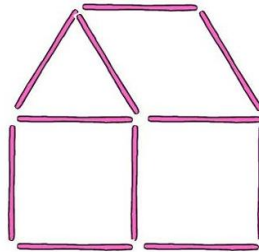
Problem #75



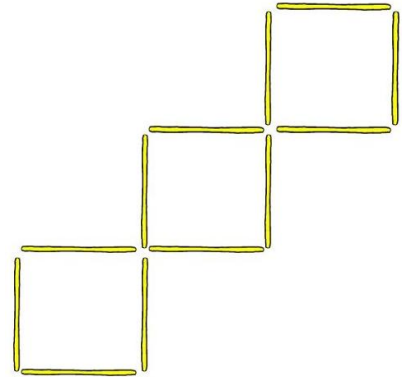
Problem #76



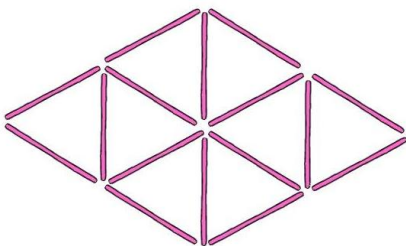
Problem #77



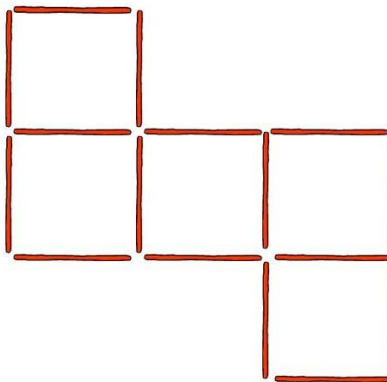
Problem #78



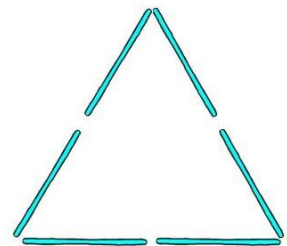
Problem #79



Problem #80

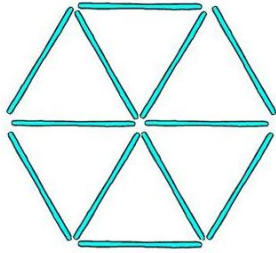


Problem #81

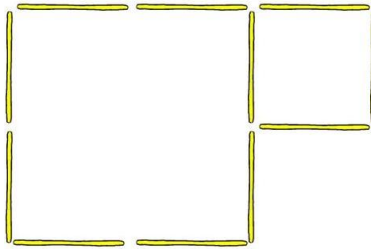


- 74: Four little triangles and one big triangle (composed of four little triangles).
- 75: Nine little squares; four medium squares (composed of four little squares each); one large square (composed of nine little squares).
- 79: Eight little triangles and two large triangles (composed of four little triangles each).

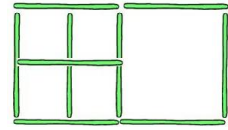
Problem #82



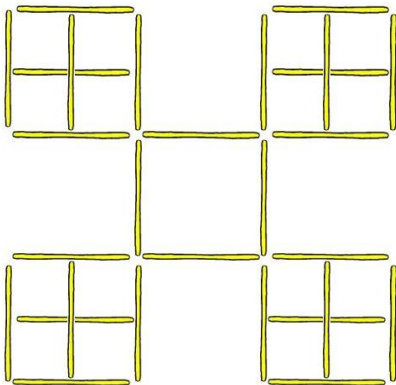
Problem #83



Problem #84



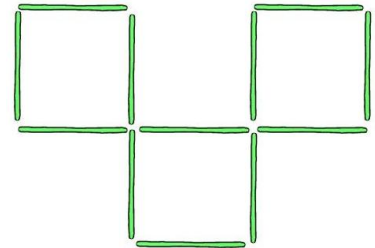
Problem #85



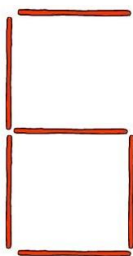
Problem #86



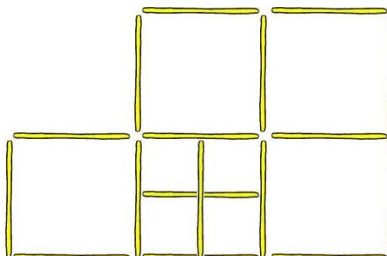
Problem #87



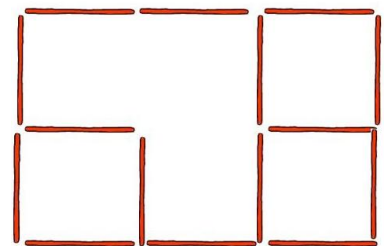
Problem #88



Problem #89

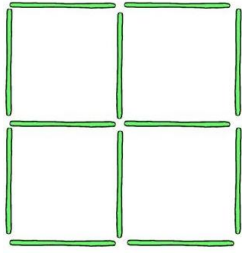


Problem #90

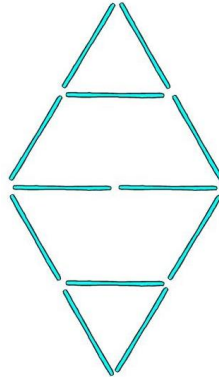


- 84: Two little squares and four micro squares (four inside the left little square).
- 85: Five little squares and sixteen micro squares (four inside each of four little squares).
- 86: A minus sign (-) is the "opposite" of a plus sign (+).
- 88: Six (6) is "one more" than five (5).
- 89: Five little squares and four micro squares (inside a little square).
- 90: Three little squares and one large square.

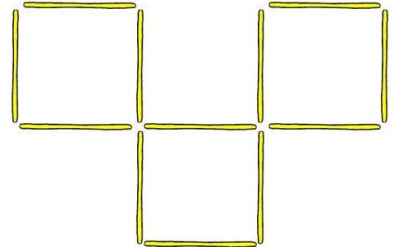
Problem #91



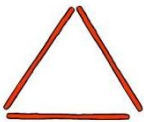
Problem #92



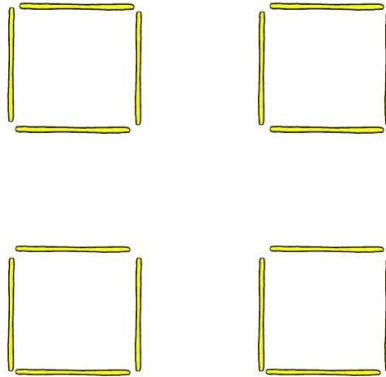
Problem #93



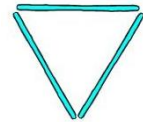
Problem #94



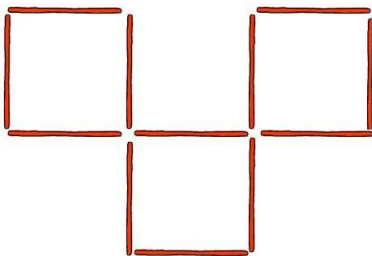
Problem #95



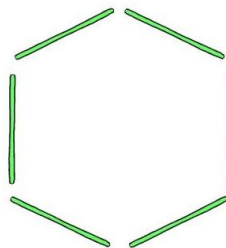
Problem #96



Problem #97



Problem #98



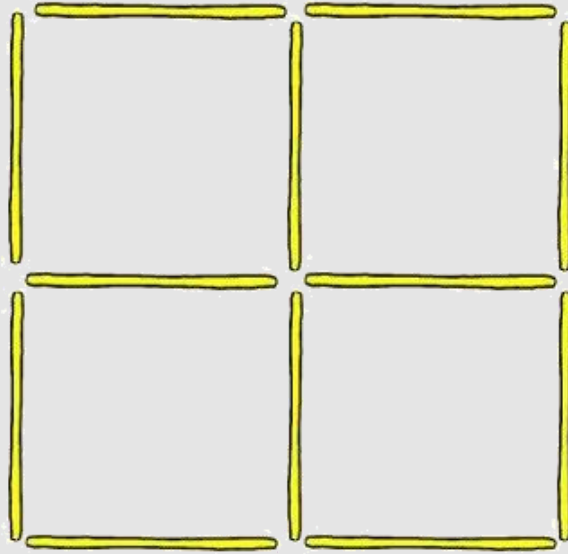
Problem #99



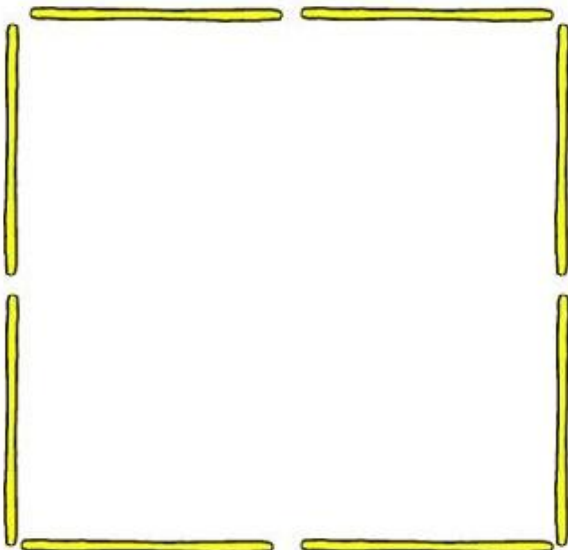
91: Four little squares and one large square (containing four little squares).

92: Two little triangles and two large triangles.

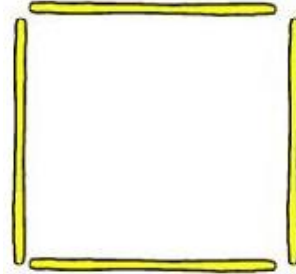
How many squares?



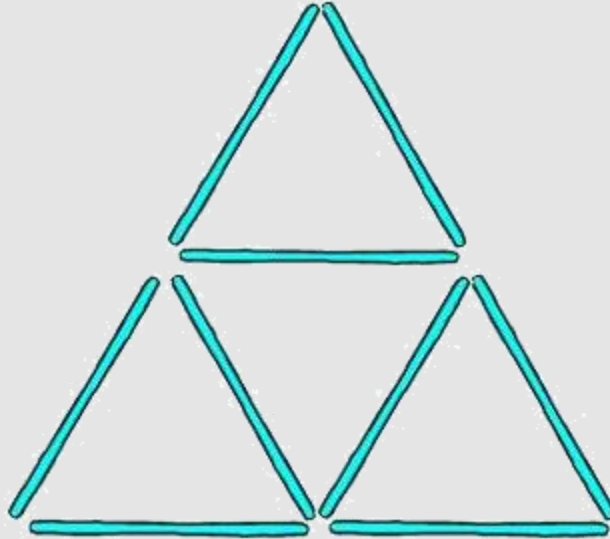
One large square



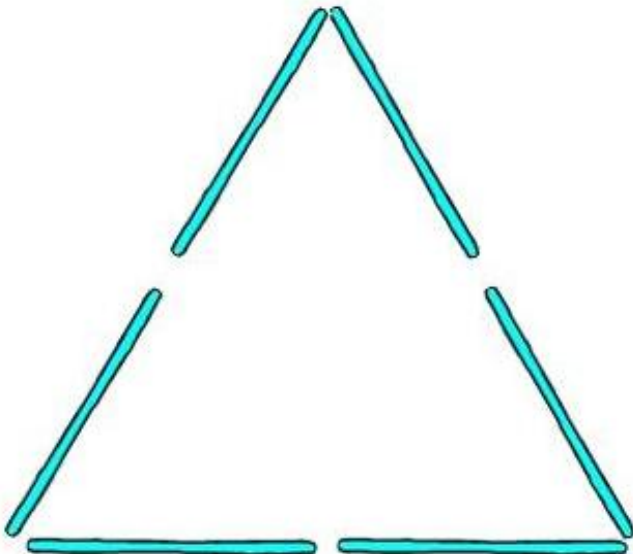
Four little squares



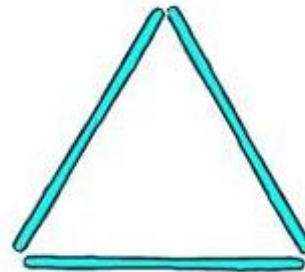
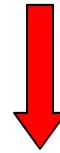
How many triangles?



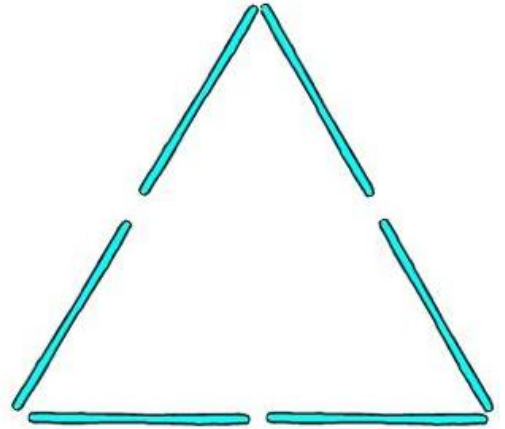
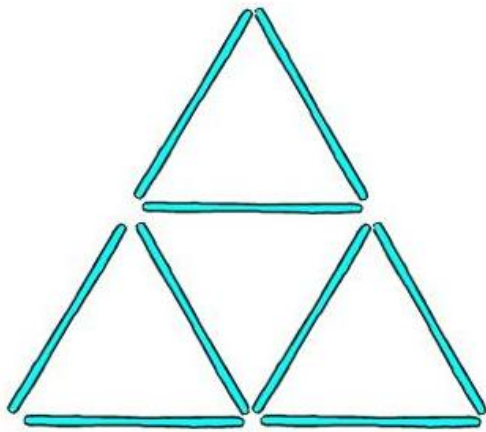
One large triangle



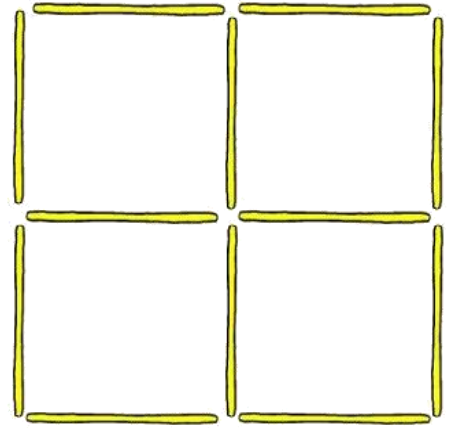
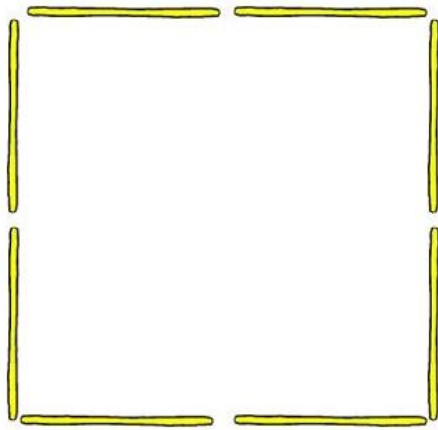
Four little triangles



Remove three toothpicks to make one triangle.



Add four toothpicks to make five squares.



Move two toothpicks to make three more.

