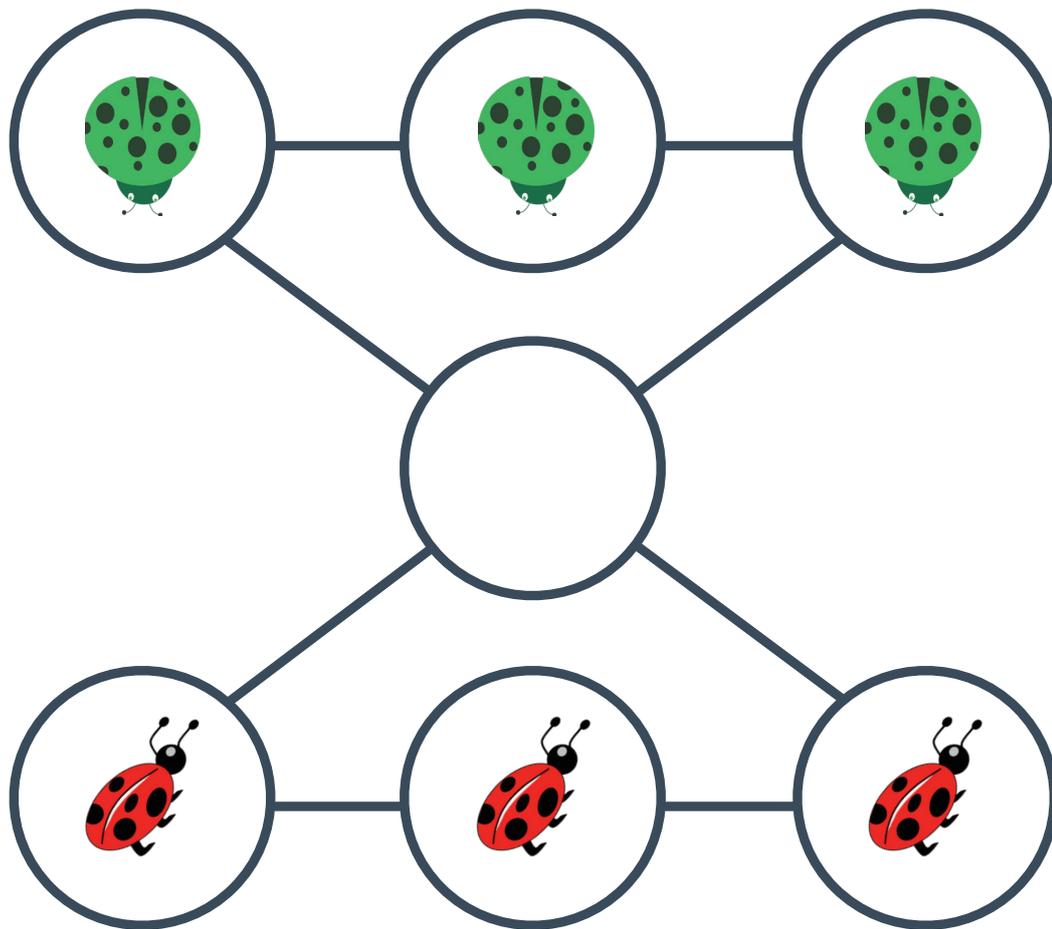


# BUGGY JUMP PUZZLE

Three red bugs and three green bugs are playing a game on the board shown below. The red bugs and the green bugs have to change places. They are allowed to do the following:

1. A bug may move from its spot along a line to an empty space as long as it doesn't pass over another bug.
2. A bug that is in one of the corner spots may jump over another bug of a different colour provided it jumps in a straight line and lands in an empty space.
3. A bug cannot jump over a bug of the same colour.



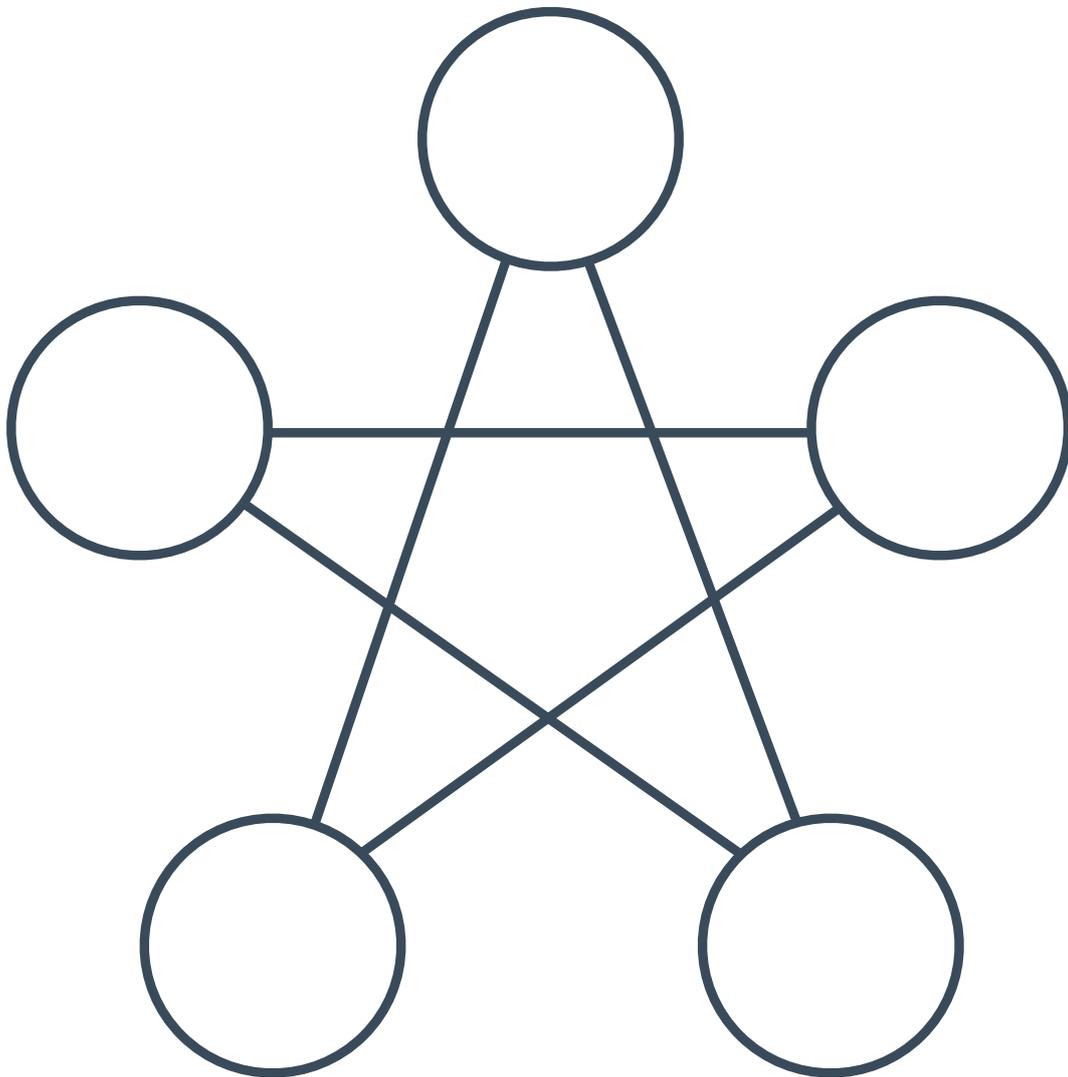
Puzzle by 

[www.mathsweek.ie](http://www.mathsweek.ie)

# COIN GAME

Can you place four coins on the star while obeying the rules below?

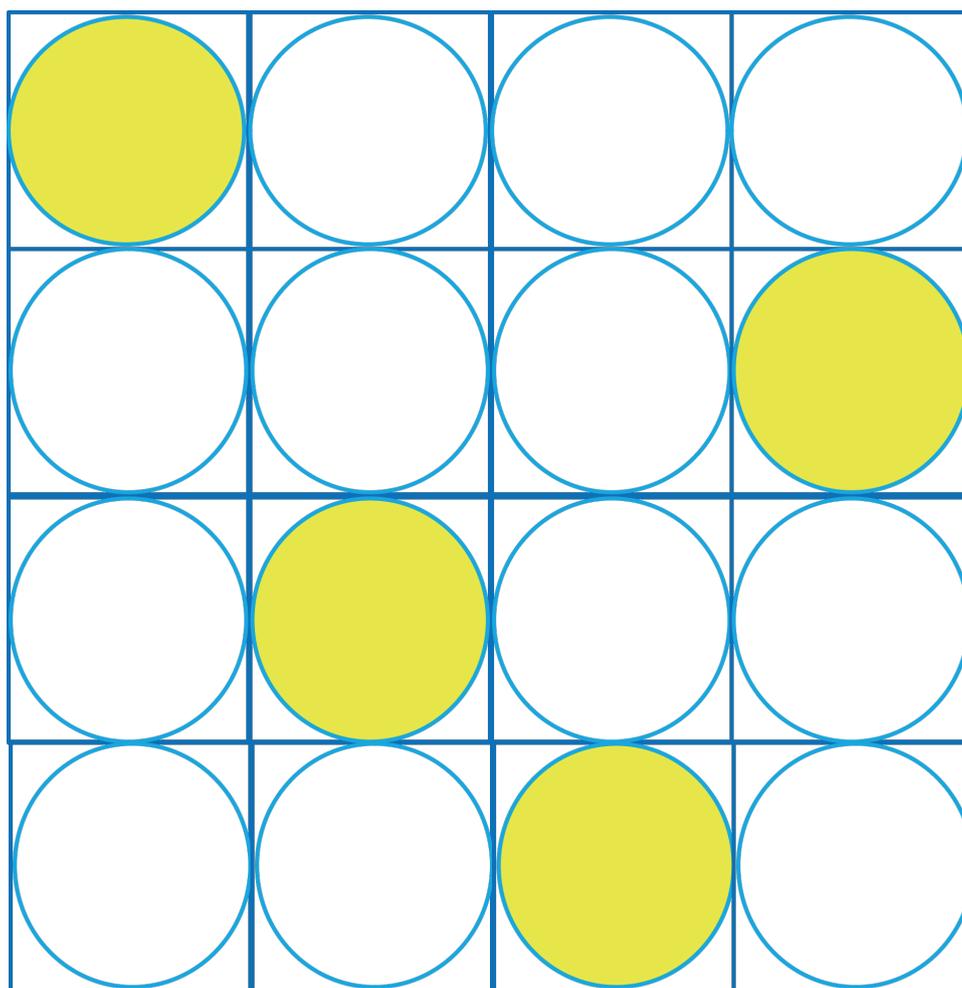
- 1) Coins cannot occupy the same space.
- 2) When placing each coin, you must start in an empty space and slide it straight along a line into another empty space. You cannot place coins in any other way.



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# COLOUR THE SQUARE

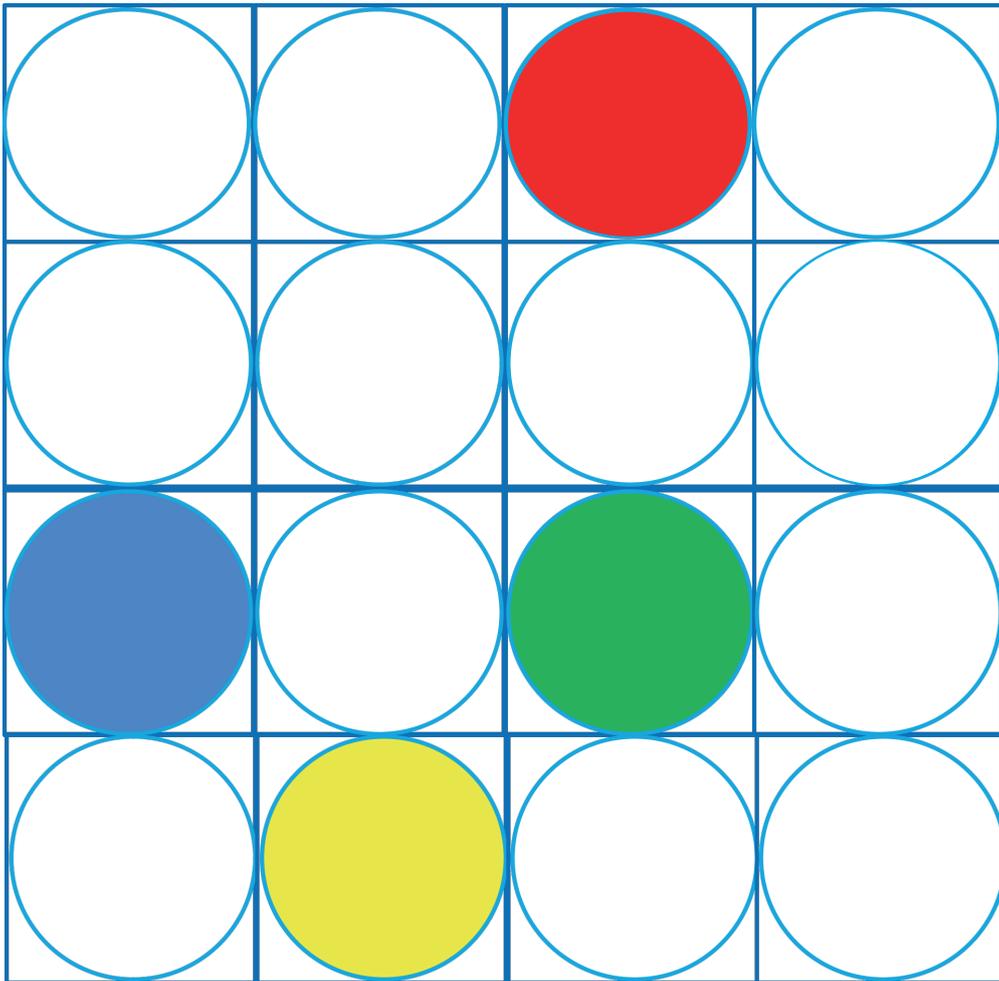
Can you fill the grid with four different colours (yellow is placed already) so that no row, column and neither of the big diagonals have two circles filled with the same colour?



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# COLOUR THE SQUARE

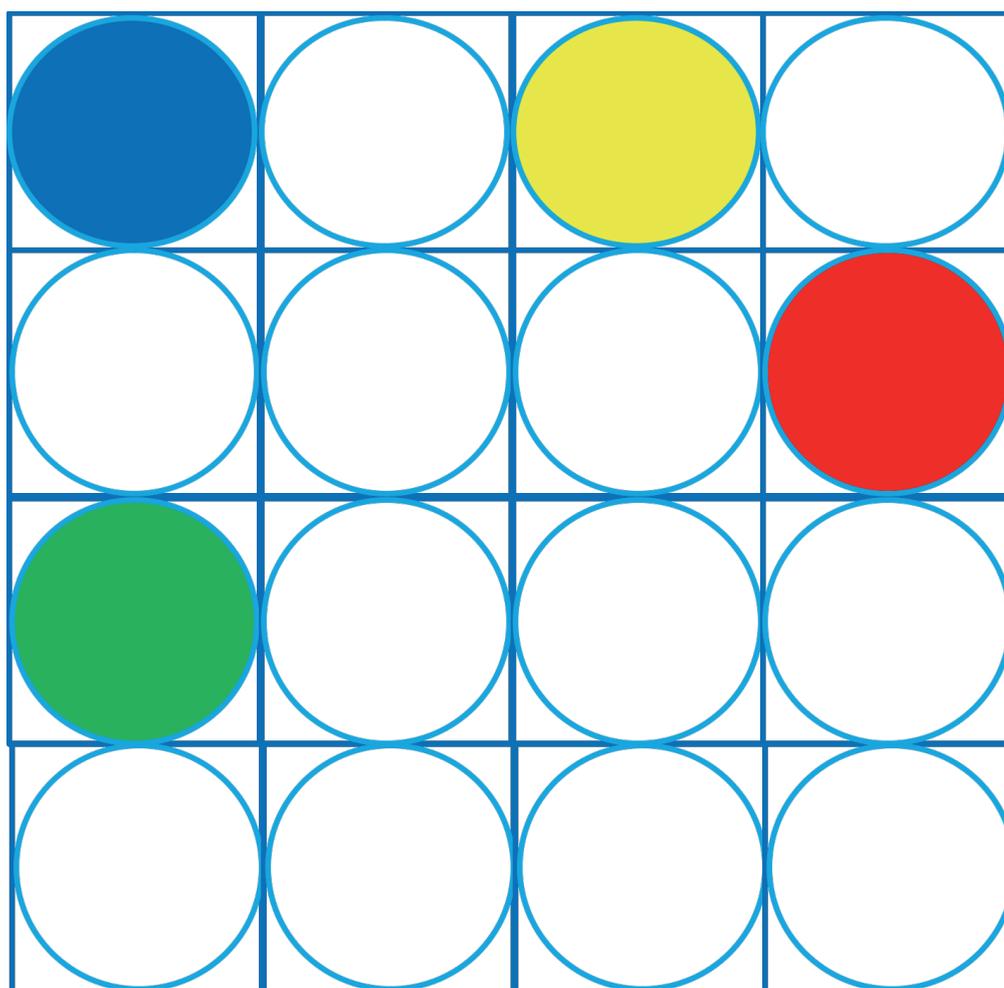
Can you fill the grid with coloured counters (red, green, blue, yellow) so that no row, column and neither of the big diagonals have two counters of the same colour?



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# COLOUR THE SQUARE

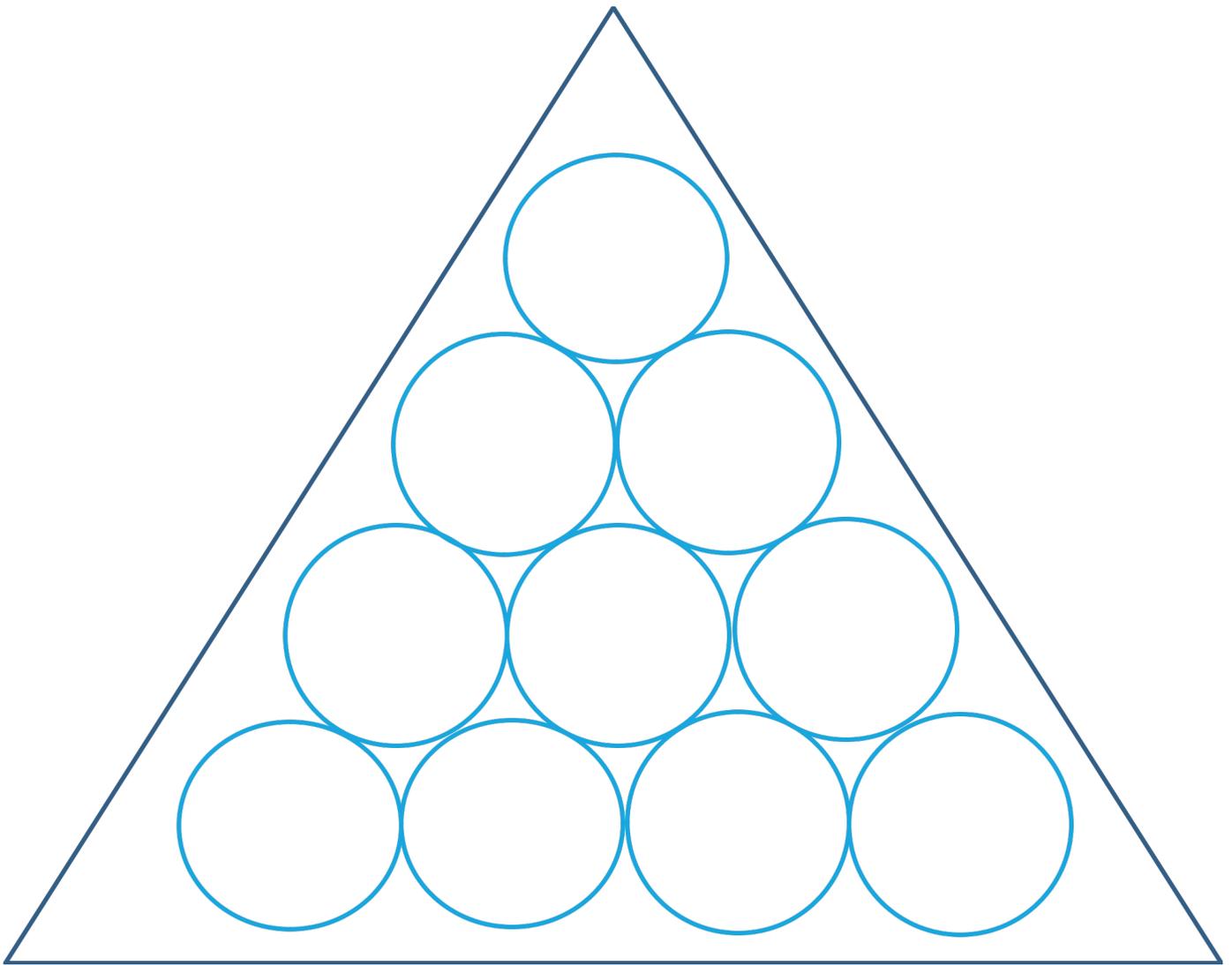
Can you fill the grid with coloured counters (red, green, blue, yellow) so that no row, column and neither of the big diagonals have two counters of the same colour?



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# COLOUR THE TRIANGLE

Can you fill the grid with three different coloured counters so that no counters of the same colour are touching?

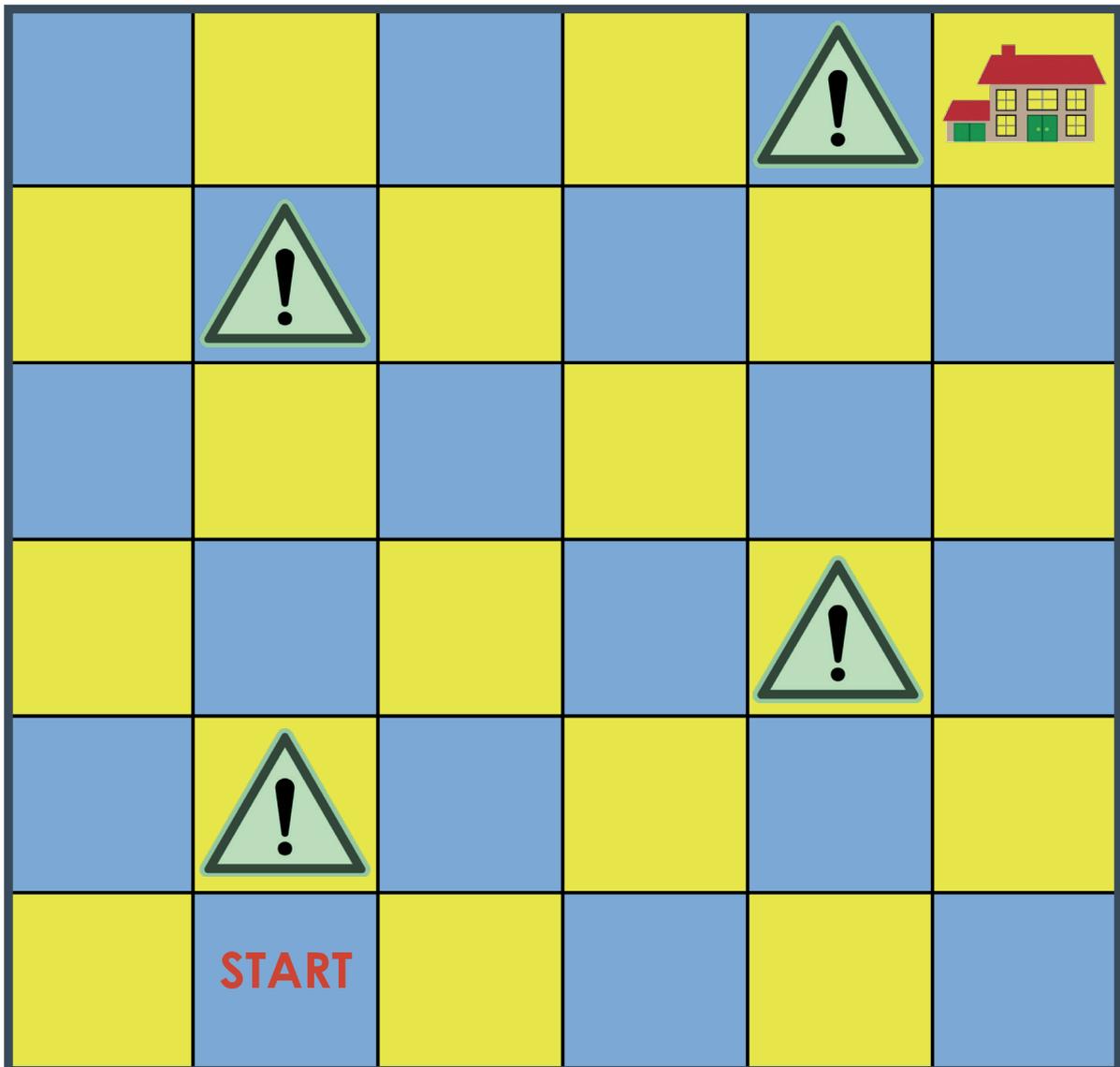


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# EVERY SQUARE IN THE GRID

Can you get home from the starting point while visiting every square in the grid once and only once (avoiding the 4 blocked squares)?

*Use a marker to trace your path and please rub out when you are finished.*

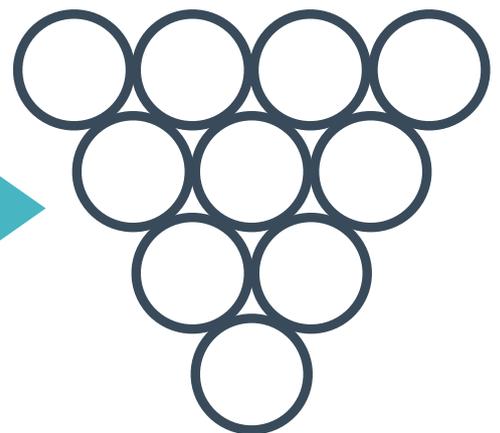
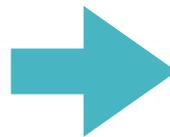
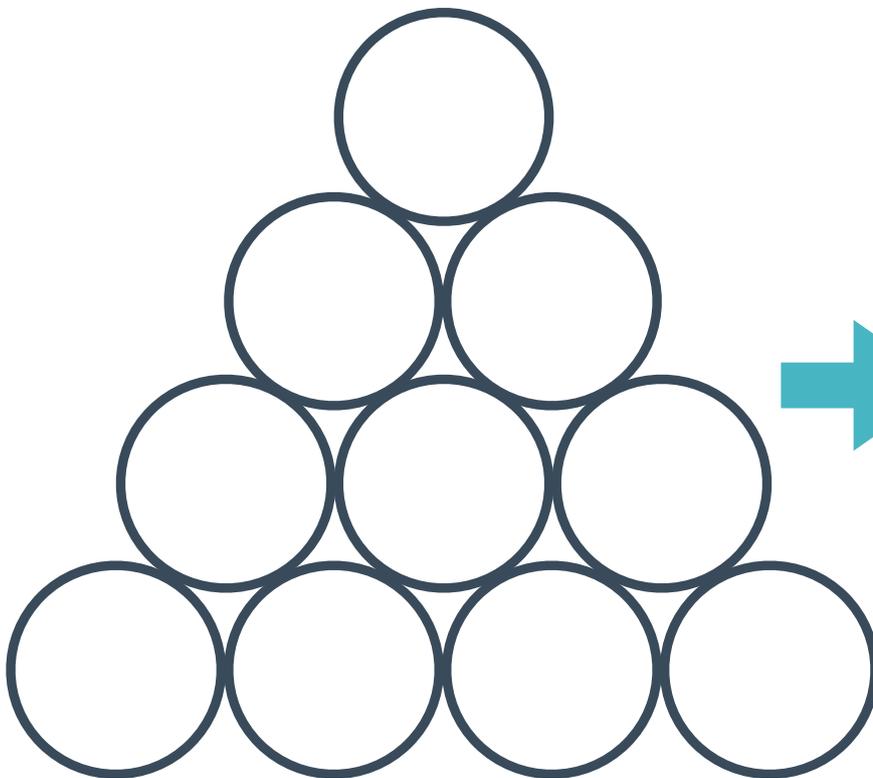
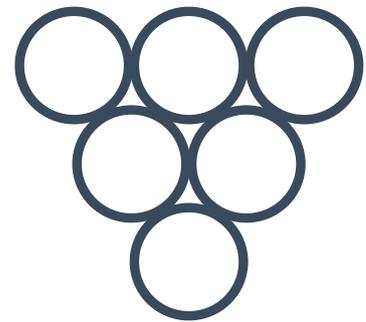
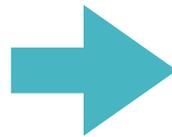
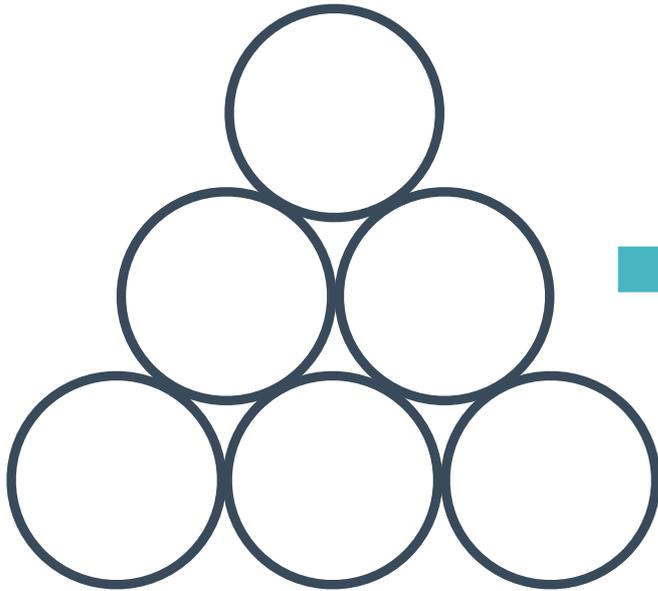


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# REVERSE THE TRIANGLE

Place six counters on the table to form the triangle shown on the left in the uppermost picture. By sliding one counter at a time, reverse the triangle so that it points in the opposite direction.

- How many counters do you have to move?
- Try it a second time with ten counters.
- Try to achieve the objective in as few moves as possible.



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