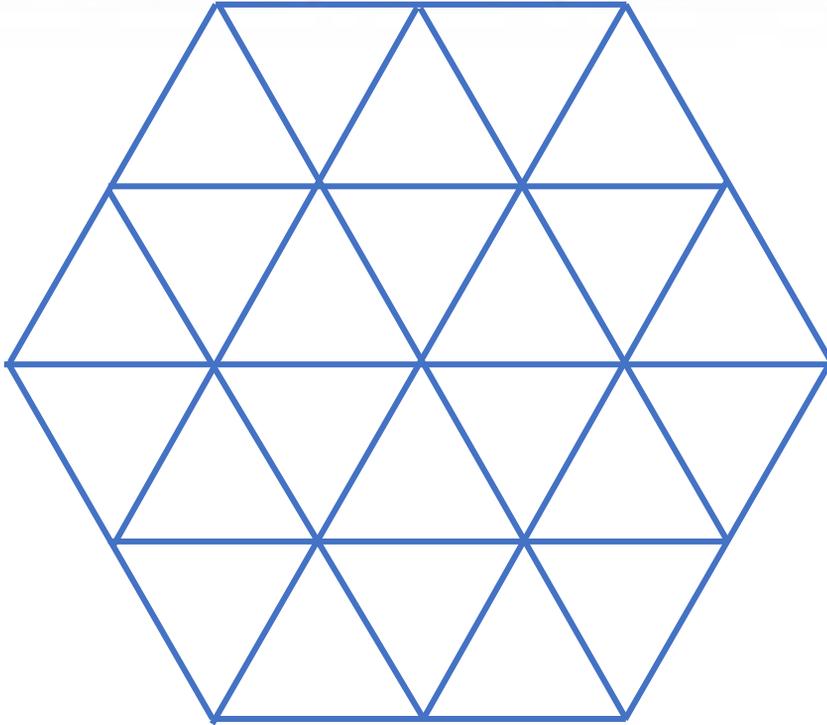




# How many can you find?



There are  triangles

There are  regular hexagons

There are  parallelograms

There are  rhombuses



CHALLENGE: how many *irregular* hexagons are there?

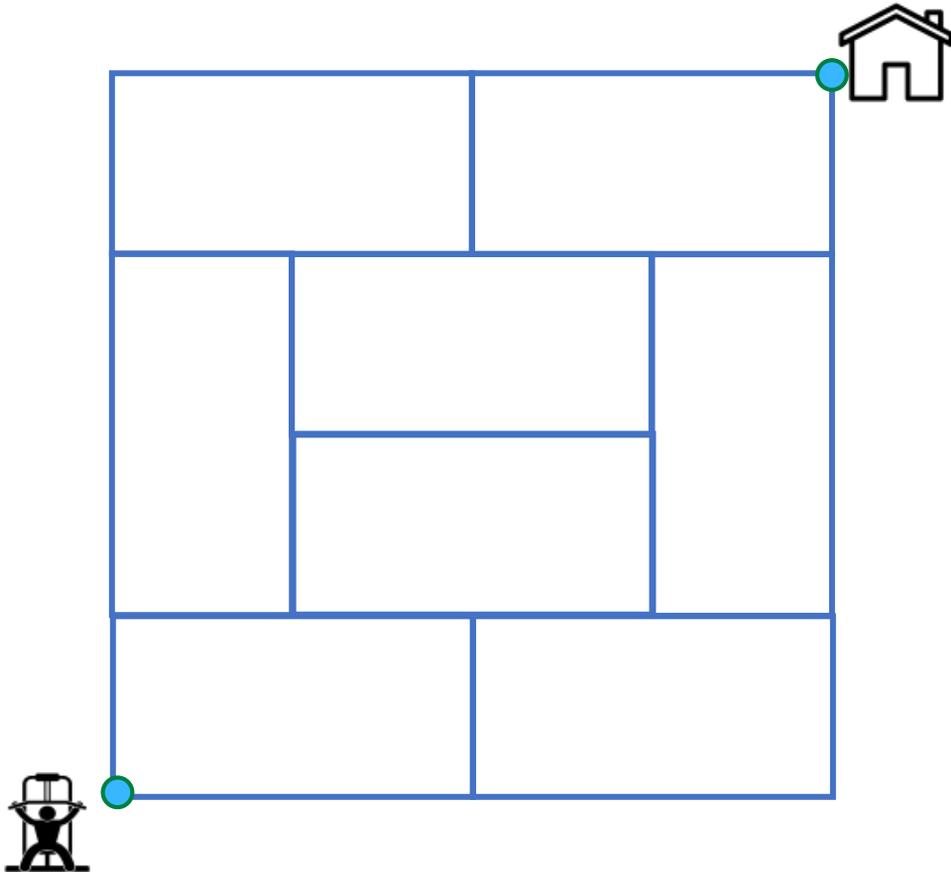
[www.mathsweekengland.co.uk](http://www.mathsweekengland.co.uk)





# Find the route

All the rectangles on this map are 200m by 100m and show the roads between my home and the gym.



I want to run from my home to the gym.

How far is the longest route I can take that doesn't use any road or junction more than once?





# What's the rule?



Can you work out what the next number should be  
in each of these number sequences ?

EASY

12, 14, 10, 16, 8, 18,

?

TRICKY

12, 12, 24, 72, 288,

?

TOUGH

12, 5, 25, 29, 85, 89,

?

NO  
CHANCE!

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 52, 54, 56, 60, 62, 64, 66

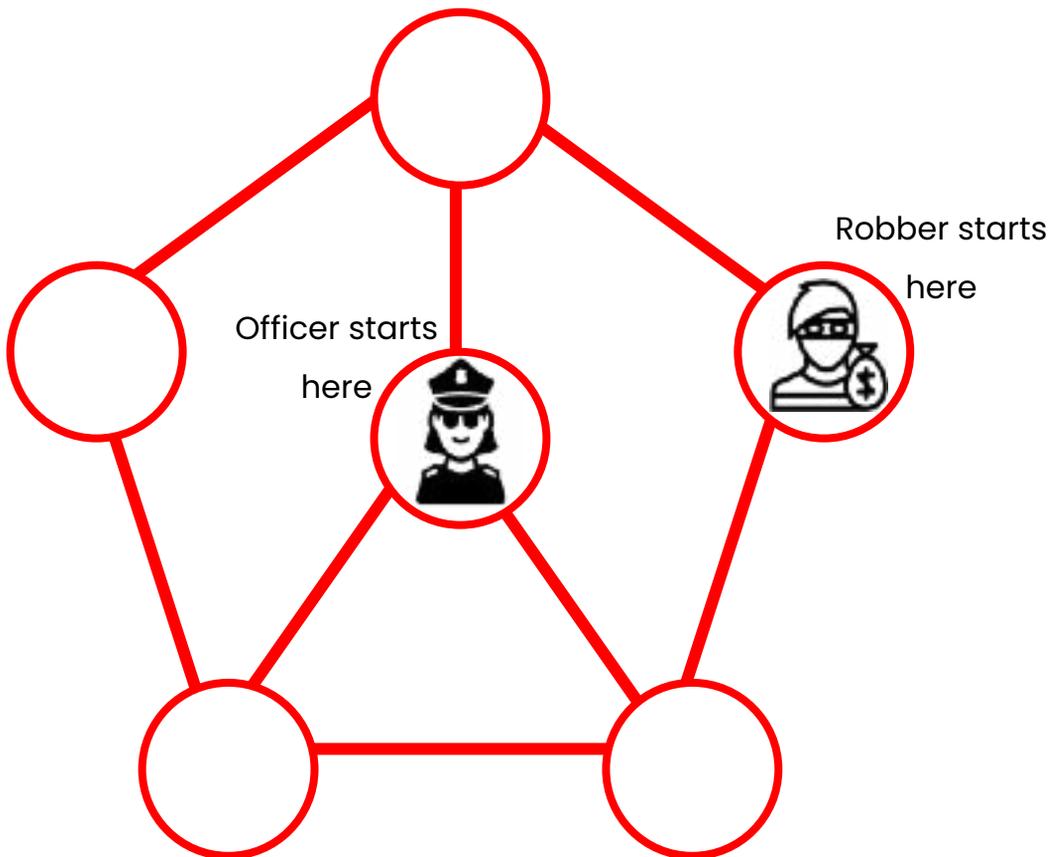
?





# Cops and Robbers

In this game, the police officer must catch the robber by being in the same circle. Players take in turns to move along the red lines to an adjacent circle. The police officer moves first.

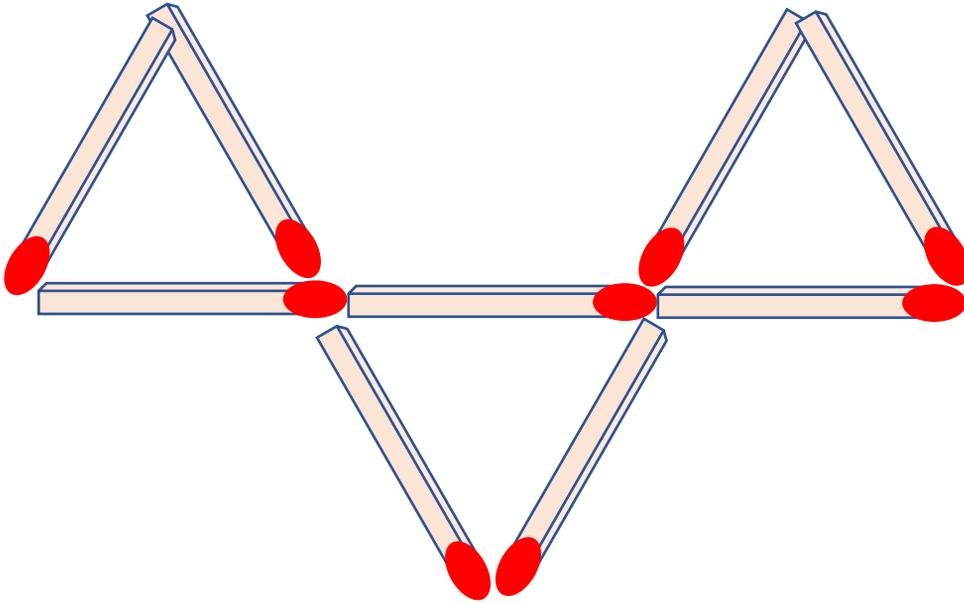


**What should the police officer's strategy be? What is the most moves she'll ever need to make in order to be sure of catching the robber?**





# Match up!



**Move any four matches to create 5 equilateral triangles.**

Puzzle taken with the author's permission from '50 Matchstick Puzzles' by Andrew Jeffrey

