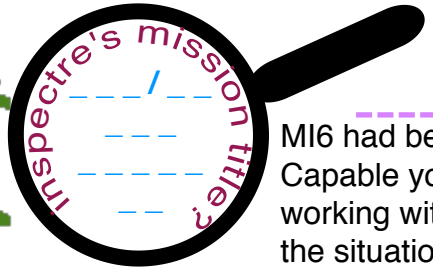
x-maths Bond II

December 6th 2:35pm A British School in Dubai, UAE

The school was in the shadow of a fusion of architecture. He took some time to admire the vast amount of Mathematics involved in the huge constructions but it wasn't long before the school inspectre found himself in room S14 with Mr Moore's Y9 Maths class. There had been a recap of recent topics - Ratio, Negative Numbers, Division... Then Mr Moore announced today's topic - Fractions.

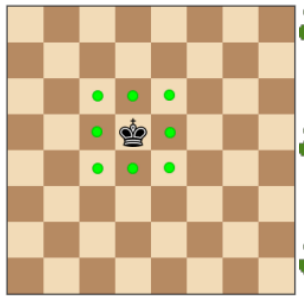
'Roger, will you open today's window on our advent calendar?' Mr Moore requested. Roger didn't need asking twice - he revealed an interesting problem.

A fraction has a larger numerator than denominator. Another fraction has a larger denominator than numerator. Find two such fractions that are equal in value!

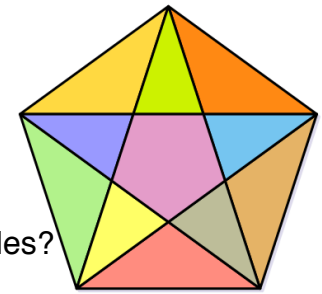


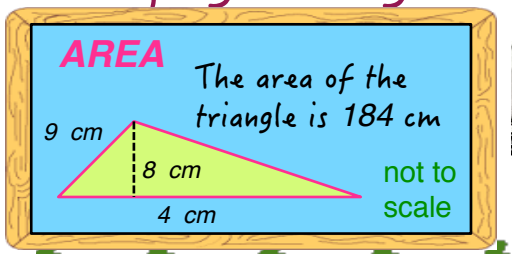
MI6 had been informed about the bafflement of educators in Rome and Tangier. Capable young Mathematicians were in a state of panic as they made silly errors while working with cube numbers and percentages. Given that Mathematics was involved, the situation had been considered serious enough to contact secret intelligence. One call by M was all that was necessary, "Bond, we need you to report to HQ, quickly!"

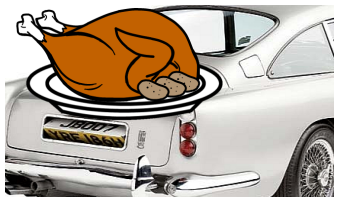
Find the minimum number of kings that can be placed on a chess board in such a way, that all free squares of the board are attacked by at least one king.



How many triangles?







abcde is a 5-digit number.

ab, bc, cd and de are each one of the smallest 20 prime numbers.

abcd is also prime.