MATHEMATICS ENRICHMENT CLUB.
Problem Sheet 2, May 13, 2019[1]

1. The diagonal of a polygon is a line joining two non-adjacent vertices. For example, the two diagonals of a square. A polygon has 152 diagonals, how many vertices does it have?

2. Find all primes p such that $17p + 1$ is a square.

3. A politician counted that the total number of sta working for him is the product of two consecutive numbers. In an upcoming election campaign, the politician plans to visit the schools in a city. The politician decides to split all his sta , himself and his wife into groups of thri

Senior Questions

1. Alex has a piece of cheese. He chooses a positive number $x > 1$ and cut the piece into two, in the ratio $1 : x$. He can then choose any piece and cut it in the same way.