



Problems – 08/07/20205

The solutions to the problems below
will be published on Sunday 08/10/2025

 **Problem 1.** The Fibonacci sequence is defined by the following formula:

$$F_1 = F_2 = 1, \quad F_{n+2} = F_{n+1} + F_n$$

(for positive integers n). Determine whether the number F_{2009} is even.

 **Problem 2.** On the sides BC and AC of triangle ABC – constructed outward – we build squares $BCDE$ and $ACFG$. Lines AE and BG intersect at point P . Prove that lines CP and AB are perpendicular.

Good Luck!

We encourage you to submit your solutions via the website:

[https://mathlovers.eu/submit-solution/!](https://mathlovers.eu/submit-solution/)