

Deadline: March 1st

Name:

Exercises

- 1) What is the last (least significant) digit of $201120122013^{201320122011}$?
 - 2) I have bought pens costing 1.01€ each one and pencil sharpeners costing 1.40€ each one. In total I have expended 29.93€. How many pens and pencil sharpeners have I bought?
 - 3) Prove that $a^5 - a$ is divisible by 30 for every a . *Hint:* $30 = 2 \cdot 3 \cdot 5$.
 - 4) Find a 3-digit number leaving remainder 4 when divided by 7, 9 or 11.
 - 5) Compute all the primitive roots modulo 17 and compute the multiplicative order of 2.
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