Set 7 - Homework

Name:

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(1) Can we solve the simultaneous congruence $x \equiv 1 \pmod 4$ and $x \equiv 0 \pmod 6$?

(2) Recall that, if p is a prime number, we have $\varphi(p^k) = p^k - p^{k-1}$. Use this, and the previous problem, to find $\varphi(300)$.