Third Homework Assignment

9/10: 1,5,9
9/13: 11,15,21
9/15: 25,31,37

Turn-in problems due 9/15: 4,10,12,16,24,30,32,38,40,46

$\star$ **problem**: Let A be an invertible 2×2 matrix with entries from $\mathbb{Z}_p$. Show that $A^{(p^2-1)(p^2-p)} = I$ for I the identity matrix. Show that for all 2×2 matrices with entries from $\mathbb{Z}_p$, $A^{(p^2-1)(p^2-p)+2} = A^2$.