Problem 59: Show that if $x \in \mathbb{Z}$, then $x^3$ can be written as $9k$, $9k + 1$, or $9k + 8$ for some $k \in \mathbb{Z}$.

Problem 60: Suppose $a, b, c \in \mathbb{Z}$ such that $a$ divides both $b$ and $c$. Show that $a$ divides $bx + cy$ for every $x, y \in \mathbb{Z}$.

(Recall: For $x, y \in \mathbb{Z}$ we say that $x$ divides $y$ if there exists $k \in \mathbb{Z}$ such that $xk = y$.)