

Assignment 7

1. The smallest prime number greater than 50 is:
2. The smallest natural number n which is a perfect square, and is divisible by 3, 4, 5 and 6 is:
3. Suppose n is a natural number such that $n \equiv 1 \pmod{4}$, $n \equiv 2 \pmod{9}$ and $n \equiv a \pmod{6}$ where $0 \leq a \leq 5$. The value of a is:
4. The smallest natural number n such that $n \equiv 0 \pmod{27}$, $n \equiv 1 \pmod{5}$ is:
5. Let p be a prime number and a, b be integers. Suppose $ab \equiv 0 \pmod{p}$, then either $a \equiv 0 \pmod{p}$ or $b \equiv 0 \pmod{p}$.
 - True.
 - False
6. Let a, b be distinct natural numbers. Let n be a natural number which is divisible by a and by b . Then n is divisible by ab .
 - True.
 - False
7. Let $n_1 > n_2$ be natural numbers satisfying the properties: $n_1 \equiv n_2 \pmod{13}$ and $n_1 \equiv n_2 \pmod{14}$. Choose all the true statements.
 - $n_1 \geq n_2 + 182$.
 - $n_1 \geq n_2 + 27$.
 - $n_2 \geq 15$.
 - $n_1 \leq 364$.