1. $\boxed{1056}$
2. If you used your notes, you wouldn't have gotten this problem wrong! Recall the formula: for numbers a and b, then $a \times b = LCM(a,b) \times GCD(a,b)$. So we know that LCM = 450, GCD = 6, and a= 18. Now we must find b: $450 \times 6 = 18 \times b$. Therefore, $b = \boxed{150}$
3. $\boxed{42}$
4. $\boxed{18}$
5. $\boxed{1}$
6. $\boxed{1800}$
7. First, factorize each of the numbers: $420 = 2^2 \cdot 3 \cdot 5 \cdot 7$, $12 = 2^2 \cdot 3$, $15 = 3 \cdot 5$, $20 = 2^2 \cdot 5$. The only number that is in the factorization of 420 that is not in the other numbers is 7. So the least possible value for k is $\boxed{7}$
8. $LCM(2,3,4,5,6) = 60$. Now we find the least four digit number that is divisible by 60, which is $60 \times 17 = \boxed{1020}$
9. $\boxed{5636}$
10. The first five composite (not prime) numbers are 4, 6, 8, 9, 10. $LCM(4,6,8,9,10) = \boxed{360}$