Name:_____

1. (2) Does 50 divide 100? Why or why not? Does 50 divide 80? Why or why not?

   100=50 x 2 so yes
   80 = 50 x (8/5) so no

2. (4) Prove that if $a=p^2 \times q^3$ and $b=p^3 \times q^2$ where a and b are positive integers, and p and q are prime, then the greatest common divisor of axb is $p^2 \times q^2$.

   Follows directly from fact that all divisors are found from prime factorization; answers may vary

3. (4) Prove that if $a=p^2 \times q^3$ and $b=p^3 \times q^2$ where a and b are positive integers, and p and q are prime, then the least common multiple of axb is $p^3 \times q^3$.

   Follows directly from fact that all multiples are found from prime factorization; answers may vary