1. According to my calculator, \(31 \times 988 - 249 \times 123 = 1\). What is \(\gcd(123, 988)\)\
\[
\gcd = 1
\]

2. Determine the \(\gcd\) of \(2^{100}3^{50}\) and \(2^{50}3^{100}\).
\[
2^{50}3^{50}
\]

3. How many different divisors/factors does 144 have?

*Prime factorizations is \(2^43^2\). So has \(5 \times 3 = 15\) factors.*