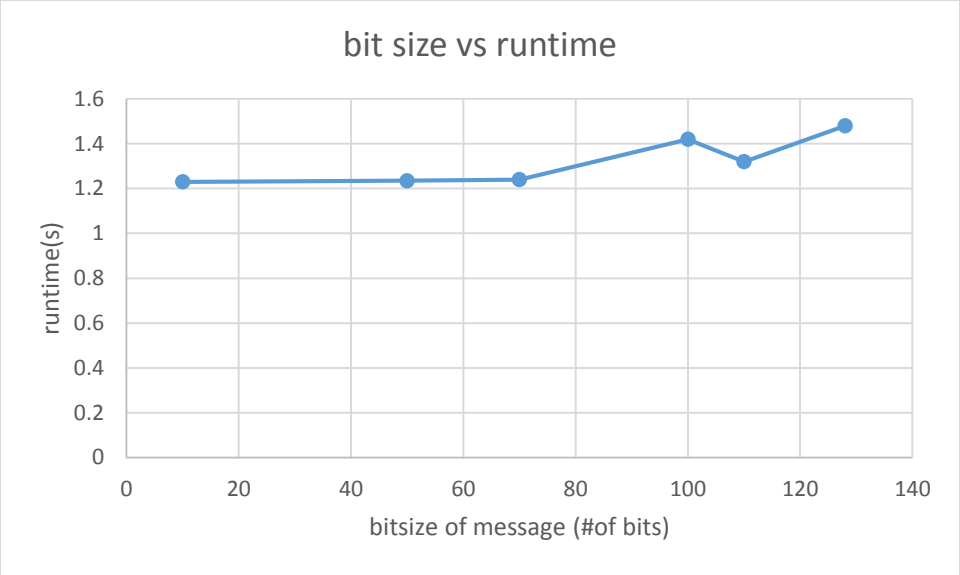

This graph illustrates the runtime of our El Gamal implementation with respect to bit size of the input message. The costliest part of our implementation was generating a new prime and generator every time, so we generalized the prime and generator because they are public parameters either way. We believe using the same prime and generator does not compromise security. We chose primes that are 128 bits because past that it became too time intensive to calculate the primes and do modular exponentiation on them. I believe the size of the prime and generator affect runtime more than the size of the message.