The management of Madeira Computing is considering the introduction of a wearable electronic device with the functionality of a laptop computer and phone. The fixed cost to launch this new product is $250,000. The variable cost for the product is expected to be between $220 and $300, with a most likely value of $260 per unit. The product will sell for $700per unit. Demand for the product is expected to range from 0 to approximately 50,000 units, with 10,000 units the most likely.

Use the Madeira v2 sheet.

Model the variable cost as a uniform random variable with a minimum of $220 and a maximum of $300. Model product demand as 5,000 times the value of a gamma random variable with an alpha parameter of 2 and a beta parameter of 1 (Use Excel function GAMMA.INV(probability, alpha, beta) to model product demand). Construct a simulation model to estimate the average profit and the probability that the project will result in a loss. Simulate 1,000 trials.

What is your recommendation regarding whether to launch the product?

