Your work must be very similar to my notes, lectures, or videos.

Be Neat, Organized, and No Work $\Leftrightarrow$ No Points

You must display full TI command to find these probabilities.

1. **Consider a geometric probability distribution with $p = 0.85$, and x be the number of trial in which the first success occurs**

    (a) **(2 points) Find $P(x = 4)$**

    (a) _____

    (b) **(2 points) Find $P(x < 4)$**

    (b) _____

    (c) **(2 points) Find $P(x > 2)$**

    (c) _____

    (d) **(2 points) Find $P(x = 2$ or $x = 3)$**

    (d) _____

    (e) **(3 points) Find μ and σ.**

    (e) _____

2. The probability that a certain NBA basketball player makes a free throw shot is about 65% of the time. Find the probability that

   (a) **(2 points)** the first shot he scores is the second shot.

   (a) _____

   (b) **(2 points)** the first shot he scores is the third or fourth shot.

   (b) _____

   (c) **(3 points)** he does not score on any of the first four he attempts.

   (c) _____

3. A shipping company finds that one in every 50 packages shipped by them arrives late at the destination. Find the probability that

   (a) **(2 points)** the first late arrival shipment is the fifth shipment.

   (a) _____

   (b) **(2 points)** the first late arrival shipment is the first, second, or third shipment.

   (b) _____

   (c) **(3 points)** none of the first 5 shipments are late.

   (c) _____