Full name: _____ Section: _____

3. Today, the student chefs are preparing the "Tortilla de Merced", a traditional Spanish egg dish with an infusion of spicy hot potato chips whose mascot is a cheetah.[2] Let us model the radius (in inches) of the dish with $R \sim \text{Exp}\left(\dfrac{1}{4}\right)$.

(a) Use Chebyshev's Inequality to compute how many dishes need to be measured so that their average radius is within 3 percent error with at least 95 percent probability.

(b) Use the Central Limit Theorem to compute how many dishes need to be measured so that their average radius is within 3 percent error with at least 95 percent probability.

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[2]Hint: parts (a) and (b) will have different answers