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Hoja de trabajo #7

Problema 1

$$\mu = 400$$

$$\sigma = 20$$

$$x = 450$$

$$X \sim N(400, 400)$$

$$P(X \geq 450) = 0.9937$$

$$1 - 0.9937 = 0.0062$$

$$R/ 0.0062$$

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Problema II

$$\text{SAT} \left\{ \begin{array}{l} \sigma = 100 \\ \mu = 480 \\ x = 550 \end{array} \right.$$

$$X \sim N(480, 10000)$$

$$a) P(X \leq 550) = 0.7580$$

$$\text{ACT} \left\{ \begin{array}{l} \sigma = 18 \\ \mu = 6 \\ x = \end{array} \right.$$

$$b) X = \mu + z \sigma$$

$$z = \frac{x - 18}{6} = 0.7$$

$$x = \mu + z \sigma$$

$$x = 18 + (0.7 \cdot 6)$$

$$x = 22.2$$

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Problema III

$$\mu = 0.7$$

$$\sigma = 0.026$$

$$X_1 = 0.11$$

$$X_2 = 0.09$$

$$a) P(X > 0.11) = 0.0619$$

$$b) P(X < 0.09) = 0.779$$

Problema IV

$$\mu = 60$$

$$\sigma = 4$$

$$a) P(X > 70) = 0.0062$$

$$b) P(X < 58) = 0.308$$

$$c) \frac{1024}{60} = 17.06$$

Problema V