$$\mu(\Sigma x_i) = \frac{a}{2}$$

$$\mu(\bar{X}) = \mu\left(\frac{\Sigma x_i}{n}\right) = \frac{1}{n}\mu(\Sigma x_i)$$

$$= \frac{1}{n} \cdot n \cdot \mu(\Sigma x_i) = \frac{na}{2}$$

$$E[\Sigma x_1 \cdots x_n] = \frac{na}{2}$$

$$Var(x) = \frac{a^2}{12}$$

$$var(\bar{x}) = v\left(\frac{\Sigma x_i}{n}\right) = \frac{1}{n^2} Var(\Sigma x_i)$$

$$= \frac{1}{n^2} \cdot n \cdot var(x_i)$$

$$= \frac{1}{n} \cdot \frac{a^2}{12} = \frac{a^2}{12n}$$