

4. *General* Suppose that  $x$  has a distribution with  $\mu = 72$  and  $\sigma = 8$ .

- (a) If random samples of size  $n = 16$  are selected, can we say anything about the  $\bar{x}$  distribution of sample means?
- (b) If the original  $x$  distribution is *normal*, can we say anything about the  $\bar{x}$  distribution of random samples of size 16? Find  $P(68 \leq \bar{x} \leq 73)$ .

5. *Coal: Automatic Loader* Coal is carried from a mine in West Virginia to a power