

- A. 10% of the observations
- B. $10\% * 10\% = 1\%$ of the observations
- C. $.1^{100}$ percent of observations
- D. For models that use the distance between points to classify individual observations, as KNN's do, there must be a small enough number of variables so that each point has a reasonable number of points "near" it. When p is large, each point is very far away in space from the others in hyperspace and may get a poor classification because of this.
- E. $P = 1 \rightarrow \text{length} = .1$
 $P = 2 \rightarrow \text{length} = \sqrt{.1} = .32$
 $P = 100 \rightarrow 100\text{th root } (.1) = .98$
When $p = n$, the length of each side will be $.10^{(1/n)}$