kNN *vs.* Linear Regression

- Linear regression: f is linear
  - low variance: need to estimate $p = 3$ parameters
  - high bias (underfit): linear assumption is very restrictive
- kNN: no assumption on f, except local some smoothness.
  - low bias (overfit): flexible and adaptive. It can be shown that as $k, n \to \infty$ such that $k/n \to 0$, kNN is consistent.
  - high variance: num of parameters for kNN is roughly n/k, which goes to ∞ in order to achieve consistency.