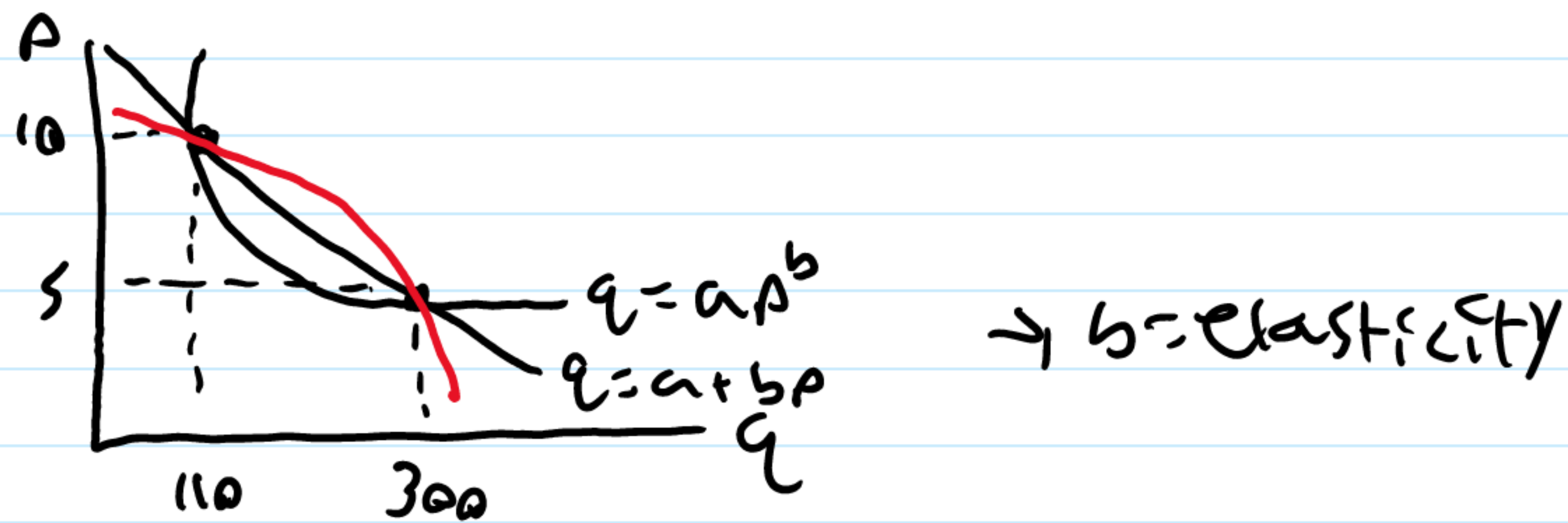


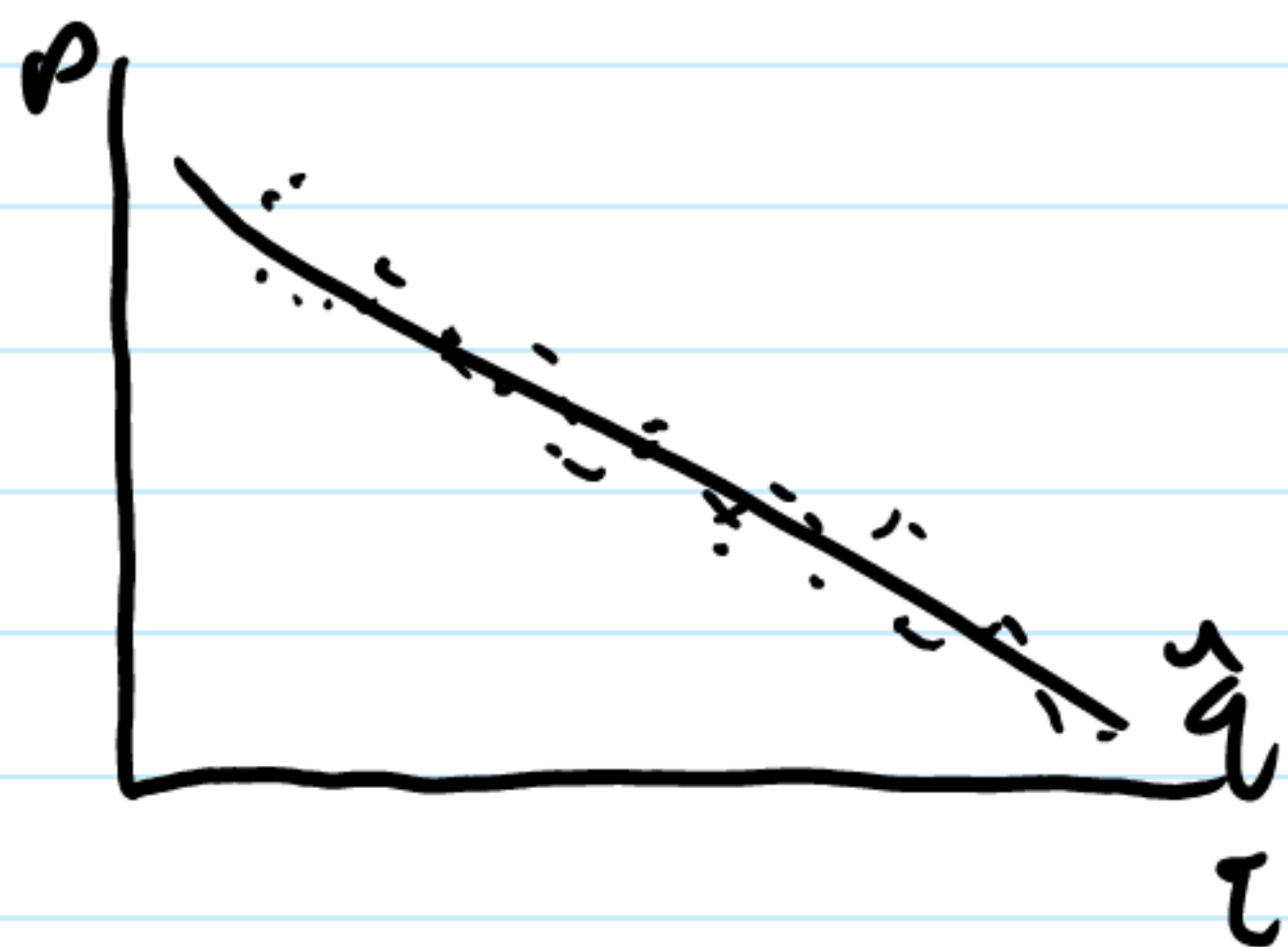
## 5.1 Estimating and

Tuesday, February 9, 2021 4:40 PM



Est demand  $\rightarrow$  est  $P^* = 15$

Simple w/ 1 Predictor, complex w/ many



### Regression

$$\sum_i (y_i - \hat{y}_i)^2 = SSR \quad \text{choose } \hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_k$$

### Evaluating a Regression

1) To predict  $y$  only

$$RMSE = s$$

$$95\% = \hat{y} \pm 2s$$

$$RMSE = \sqrt{SSR / (N - k - 1)}$$

### Evaluating Coefficients

$$\hat{y} = 1 + 3x$$

$$\beta_0 \quad \beta_1 \quad s_{\hat{\beta}_1} = .5$$

$$95\% CI = \hat{\beta}_1 \pm 2s_{\hat{\beta}_1}$$

