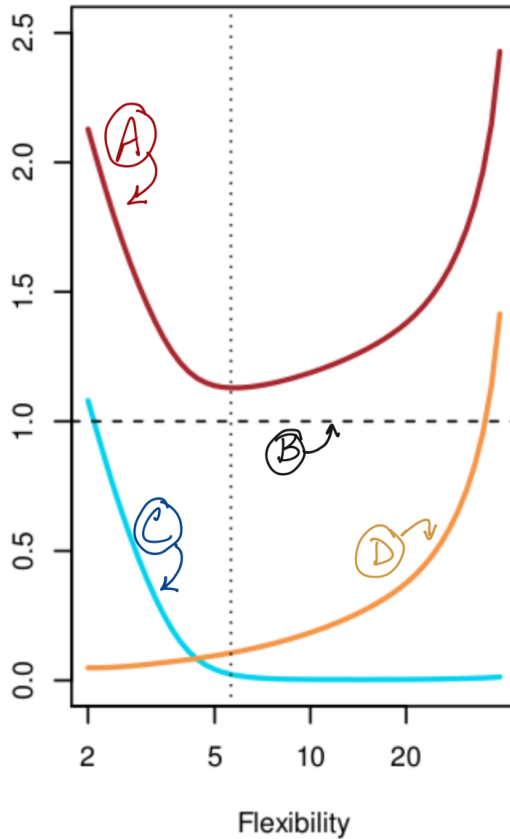# CMSE381 - Quiz 1

I will adhere to the Spartan Code of Honor in completing this assignment.

Signed: _____ Print Name: _____

1. For each item in the list, write the letter of the line from the figure at left.

- MSE: ___A___

- Bias: ___C___

- Variance of $\hat{f}(x_0)$: ___D___

- Variance of ϵ: ___B___

2. In simple linear regression, the *least squares coefficient estimates* are the choices for coefficients in our model that minimize *something*. What is it?

   RSS

3. Computing the testing MSE of the estimated estimator $\hat{f}(X_1, X_2, X_3) = X_1 + X_2$ based on the table below.

	Training data		Testing data	
X1	1	0	1	2
X2	2	1	-1	1
X3	1	3	0	1
Y	1	2	1	1

$\hat{f}:$ 0   3

$\hat{f}-Y:$ -1   2

$(\hat{f}-Y)^2:$ 1   4

testing MSE $= \frac{1}{2}(1+4) = \frac{5}{2}$