socrative

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DM-Spring-2020-Q5-Grade 81.25% (13/16)

✗ **1.** In the multiple linear regression, we assume that...

- A The number of observations is much larger than the number of variables (n>>p)
- B The number of observations is slightly larger than the number of variables (n>p)
- C The number of observations equals than the number of variables (n=p)
- D The number of observations is lees than the number of variables (n<p)
- E It is not important
- F I do not know

✓ **2.** The way of solving the problem of a large number of variables is...

- A Subset Selection & Shrinkage (Regularization)
- B Shrinkage (Regularization) & Maximum Likelihood estimation
- C Dimension Reduction & OLS estimation
- D I do not know
- E The absence of the right answer

✓ **3.** The bias of an estimator (e.g. z^) equals

- A E(z^) - z
- B E(z^2) - [E(z)]^2
- C [E(z^2) - E(z)]^2
- D E(z^2)
- E I do not know

✓ **4.** The main idea of regularization is

- A To introduce a small amount of bias in order to have less variance.
- B To introduce a small amount of variance in order to have less bias.
- C To introduce a small amount of variance and bias in order to have less bias.
- D I do not know

✓ **5.** With which function we can show regularization in R

- A glmnet()
- B regular()
- C lm()
- D glm()
- E I do not know

✓ **6.** How the tune of any parametr can be made

- A using Cross validation
- B It is impossible
- C I do not now
- D using larger sample
- E only having population

✓ **7.** Elastic Net is

- A the combination of L1 and L2 regularization
- B the combination of L2 and L3 regularization
- C is independent from other types of refularization
- D I do not know
- E not a type of regularization

✗ **8.** Regularization is used only for

- A Poisson Regression
- B Linear Regression
- C Logistic Regression
- D any regression
- E I do not know

✓ **9.** Regularization can solve the problem of

- A heteroscedasticity
- B multicollinearity
- C autocorrelation
- D I do not know

✓ **10.** As a result of regularization, we will have

- A smaller slope than in case of OLS
- B larger slope than in case of OLS
- C the slope remains the same
- D I do not know

✓ **11.** The ridge coefficient estimates shrink towards zero

- A when lambda increases
- B when lambda decreases
- C when lambda = 0
- D I do not know

✓ **12.** Which one can shrink the slope all the way to 0?

- A Lasso
- B Ridge
- C Regression
- D I do not know

✓ **13.** When lambda = 0, we have

- A Ridge
- B Lasso
- C EL
- D Regression
- E I do not know

✗ **14.** When alpha = 0, we have

- A Ridge
- B Lasso
- C EL
- D Regression
- E I do not know

15. Which function can help to perform cross-validation for regularization in R?

- A cv.glmnet()
- B cros_val()
- C glmnet(method = "cv)
- D I do not know

16. Why we use set.seed() in R?

- A To have universal result
- B To perform better result
- C To have random models
- D I do not know