Assessing Performance

13 试题

1 point

1.
If the features of Model 1 are a strict subset of those in Model 2, the TRAINING error of the two models can **never** be the same.

- ○ True
- ● False

1 point

2.
If the features of Model 1 are a strict subset of those in Model 2, which model will USUALLY have lowest TRAINING error?

- ○ Model 1
- ● Model 2
- ○ It's impossible to tell with only this information

1 point

3.

If the features of Model 1 are a strict subset of those in Model 2. which model will USUALLY have lowest TEST error?

- ○ Model 1
- ○ Model 2
- ● It's impossible to tell with only this information

---

1 point

4.

If the features of Model 1 are a strict subset of those in Model 2, which model will USUALLY have lower BIAS?

- ○ Model 1
- ● Model 2
- ○ It's impossible to tell with only this information

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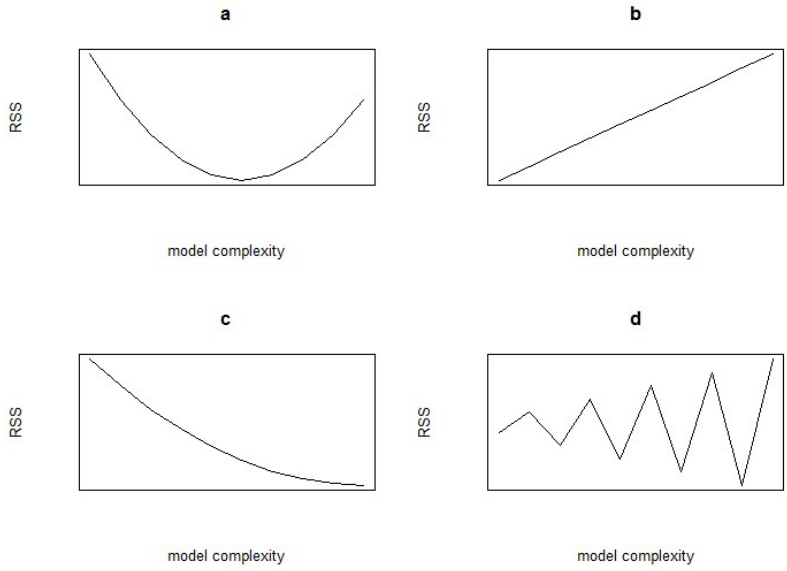
1 point

5.

Which of the following plots of model complexity vs. RSS is most likely from TRAINING data (for a fixed data set)?

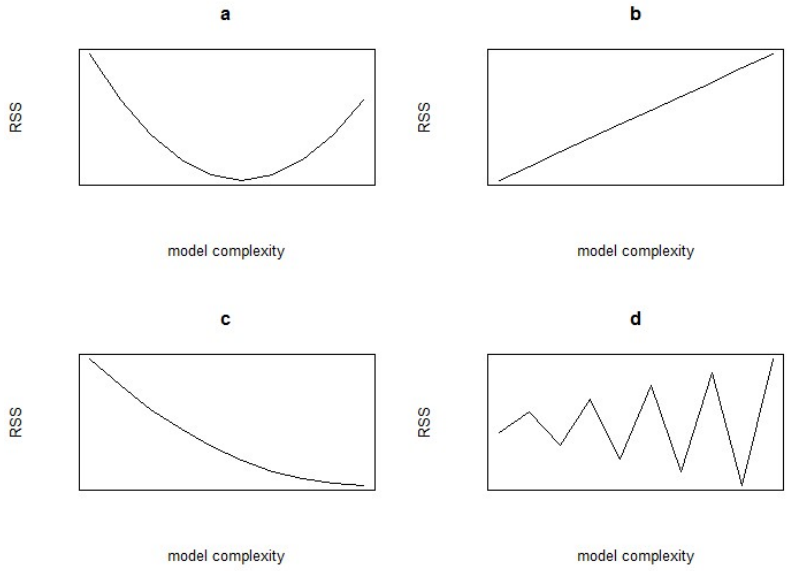


- a
- b
- c
- d

1 point

6.

Which of the following plots of model complexity vs. RSS is most likely from TEST data (for a fixed data set)?



- (●) a
- ( ) b
- ( ) c
- ( ) d

---

1 point

7.

It is **always** optimal to add more features to a regression model.

- ( ) True
- (●) False

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1 point

8.
A simple model with few parameters is most likely to suffer from:

- (●) High Bias
- ( ) High Variance

---

1 point

9.
A complex model with many parameters is most likely to suffer from:

- ( ) High Bias
- (●) High Variance

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1 point

10.
A model with many parameters that fits training data very well but does poorly on test data is considered to be

- ( ) accurate
- ( ) biased
- (●) overfitted
- ( ) poorly estimated

---

1 point

11.

A common process for selecting a parameter like the optimal polynomial degree is:

- ○ Bootstrapping
- ○ Model estimation
- ○ Multiple regression
- ○ Minimizing test error
- ◉ Minimizing validation error

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1 point

12.

Selecting model complexity on test data (choose all that apply):

- ☐ Allows you to avoid issues of overfitting to training data
- ☑ Provides an overly optimistic assessment of performance of the resulting model
- ☐ Is computationally inefficient
- ☑ Should never be done

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1 point

13.

Which of the following statements is true (select all that apply): For a **fixed model complexity**, in the limit of an infinite amount of training data,

- ☐ The noise goes to 0
- ☐ Bias goes to 0
- ☑ Variance goes to 0

- [ ] Training error goes to 0
- [ ] Generalization error goes to 0

- [x] I, **伟臣 沈**, understand that submitting work that isn't my own may result in permanent failure of this course or deactivation of my Coursera account.
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