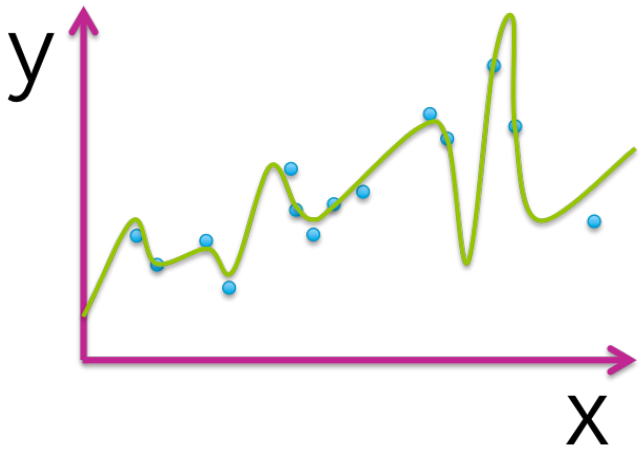
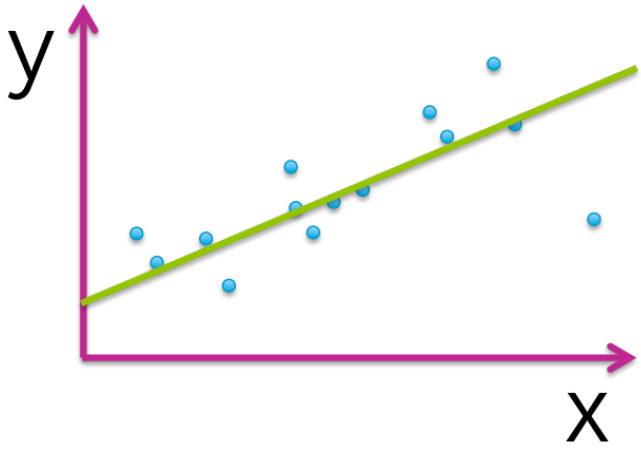
# Regression

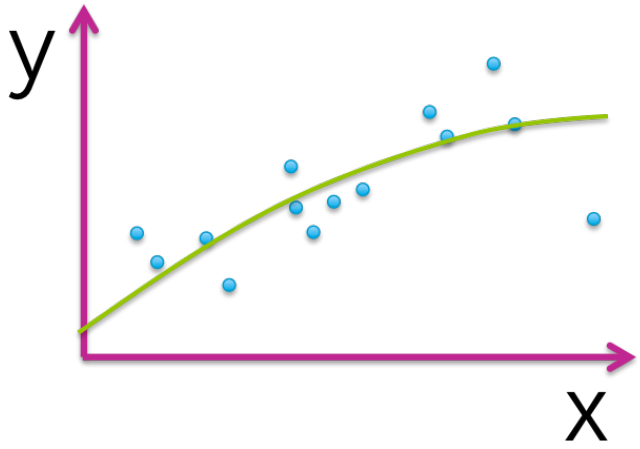
9 试题

1 point

1.
Which figure represents an overfitted model?






1 point

2.
***True or false:*** The model that best minimizes training error is the one that will perform best for the task of prediction on new data.

**True**

**False**

1 point

3.

The following table illustrates the results of evaluating 4 models with different parameter choices on some data set. Which of the following models fits this data the best?

| Model index | Parameters (intercept, slope) | Residual sum of squares (RSS) |
|---|---|---|
| 1 | (0,1.4) | 20.51 |
| 2 | (3.1,1.4) | 15.23 |
| 3 | (2.7, 1.9) | 13.67 |
| 4 | (0, 2.3) | 18.99 |

- ○ **Model 1**
- ○ **Model 2**
- ● **Model 3**
- ○ **Model 4**

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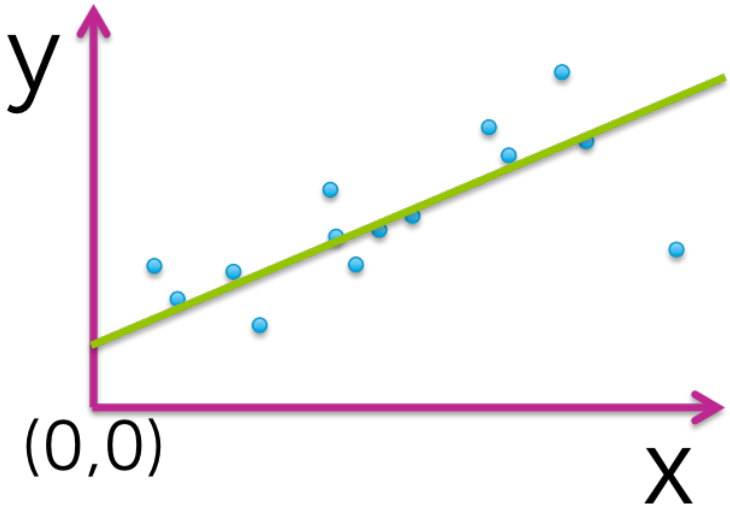
1 point

4.

Assume we fit the following quadratic function: f(x) = w0+w1*x+w2*(x^2) to the dataset shown (blue circles). The fitted function is shown by the green curve in the picture below. Out of the 3 parameters of the fitted function (w0, w1, w2), which ones are estimated to be 0? *(Note: you must select all parameters estimated as 0 to get the question correct.)*




- [ ] **w0**
- [ ] **w1**
- [x] **w2**
- [ ] **none of the above**

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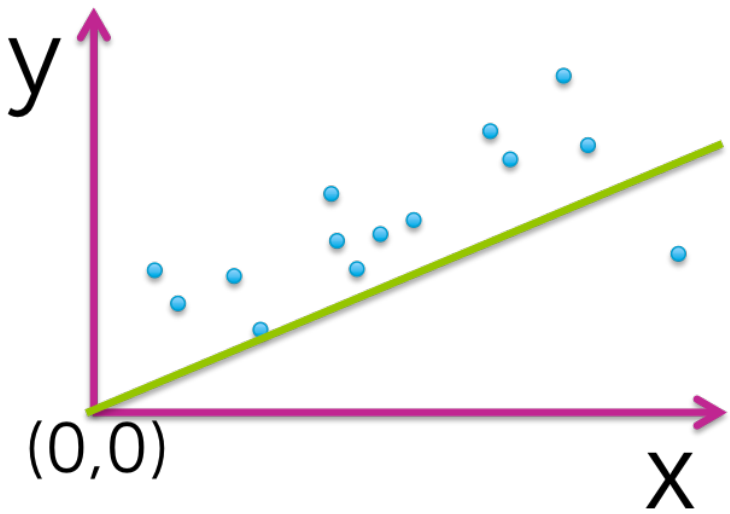
1 point

5.

Assume we fit the following quadratic function: f(x) = w0+w1*x+w2*(x^2) to the dataset shown (blue circles). The fitted function is shown by the green curve in the picture below. Out of the 3 parameters of the fitted function (w0, w1, w2), which ones are estimated to be 0? *(Note: you must select all parameters estimated as 0 to get the question correct.)*



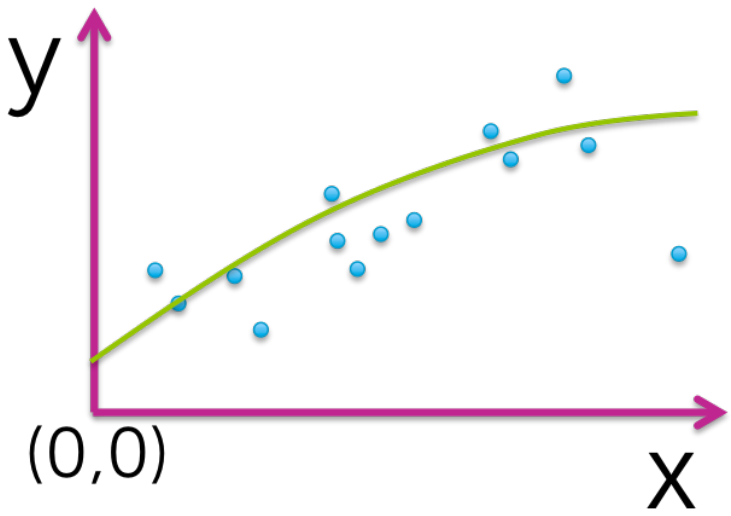

- [x] **w0**
- [ ] **w1**
- [x] **w2**
- [ ] **none of the above**

---

1 point

6.

Assume we fit the following quadratic function: f(x) = w0+w1*x+w2*(x^2) to the dataset shown (blue circles). The fitted function is shown by the green curve in the picture below. Out of the 3 parameters of the fitted function (w0, w1, w2), which ones are estimated to be 0? *(Note: you must select all parameters estimated as 0 to get the question correct.)*



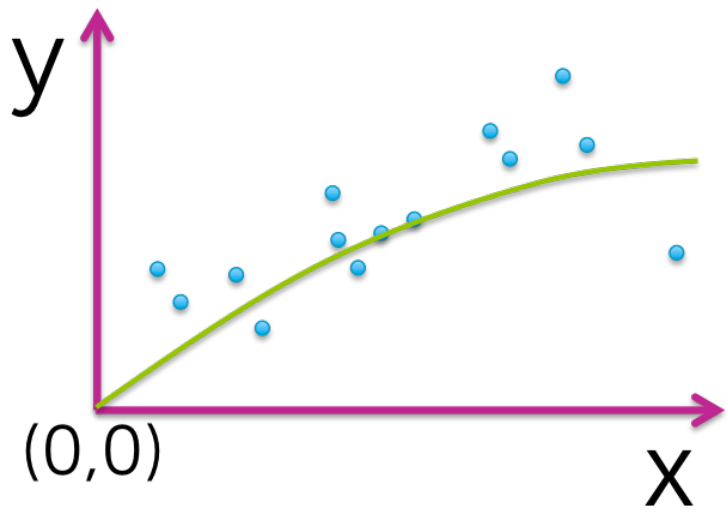

- [ ] **w0**
- [ ] **w1**
- [ ] **w2**
- [x] **none of the above**

---

1 point

7.

Assume we fit the following quadratic function: f(x) = w0+w1*x+w2*(x^2) to the dataset shown (blue circles). The fitted function is shown by the green curve in the picture below. Out of the 3 parameters of the fitted function (w0, w1, w2), which ones are estimated to be 0? *(Note: you must select all parameters estimated as 0 to get the question correct.)*




- [x] **w0**
- [ ] **w1**
- [ ] **w2**
- [ ] **none of the above**

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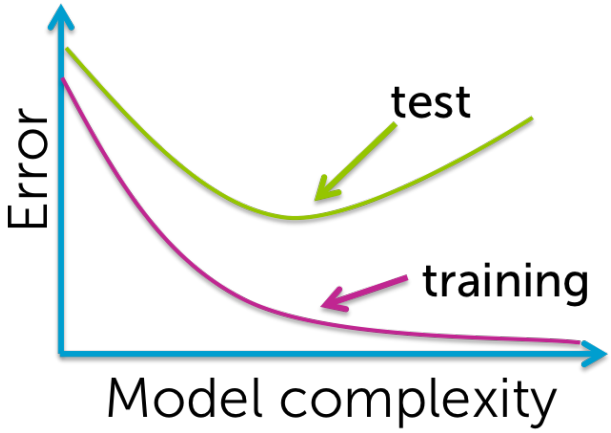
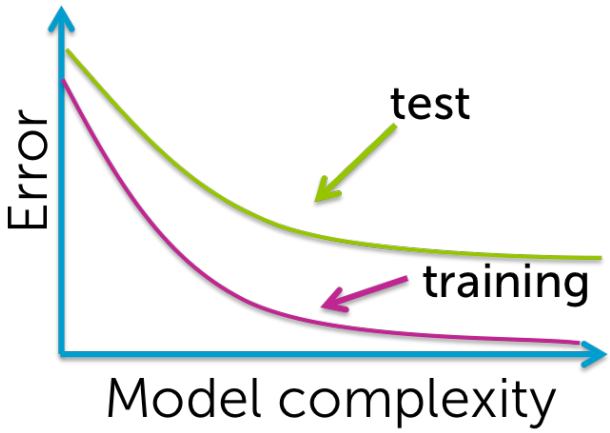
1 point

8.
Which of the following plots would you ***not*** expect to see as a plot of training and test error curves?

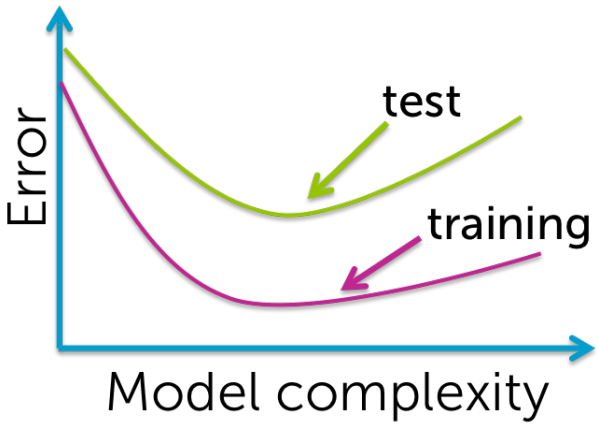
- ○


Error
test
training
Model complexity

○


Error
test
training
Model complexity

◉


Error
test
training
Model complexity

1 point

9.

***True or false:*** One always prefers to use a model with more features since it better captures the true underlying process.

- **True**
- **False**

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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