

34.875

Find the linear regression equation for the following data points:

x	y
3	6
5	10
7	9
9	17

-1 & 1

Find SS_{res} for the following data points
(use linear regression):

x	y
3	6
5	10
7	9
9	17

Residual Plot Random, good fit

Find SS_{dev} for the following data points:

x	y
3	23
6	37
11	31
18	62

-5.2

- Enter this table into your calculator
- Calculate the value of \bar{y}

x	Y
2	14
4	17
6	26
8	34
10	33
12	44
14	53
16	58

$$\hat{y} = \underline{36.11(.947)^x}$$

Calculate the value of the coefficient of determination if:

$$SS_{res} = 14.4 \text{ and } SS_{dev} = 160$$

$$\hat{y} = \underline{5.2(.03)^x}$$

What are two different values of the correlation coefficient that tell you the regression line fits the data perfectly?

13.8

Find the regression equation for the function that models this data best

x	Y
5	27
10	21
15	16
20	13
25	9
30	7

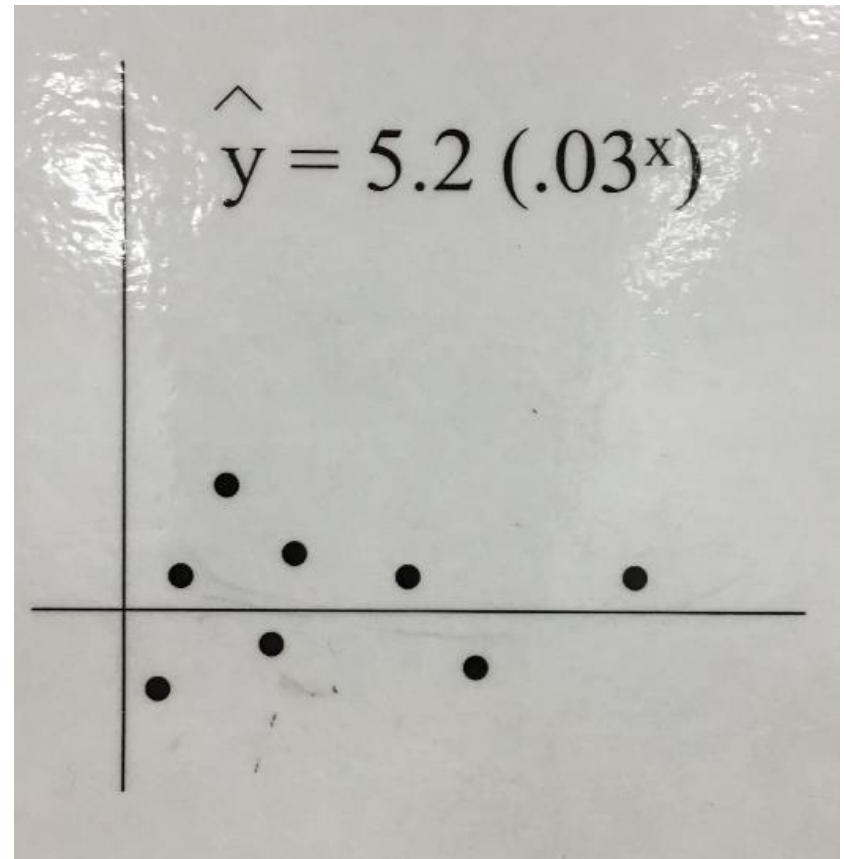
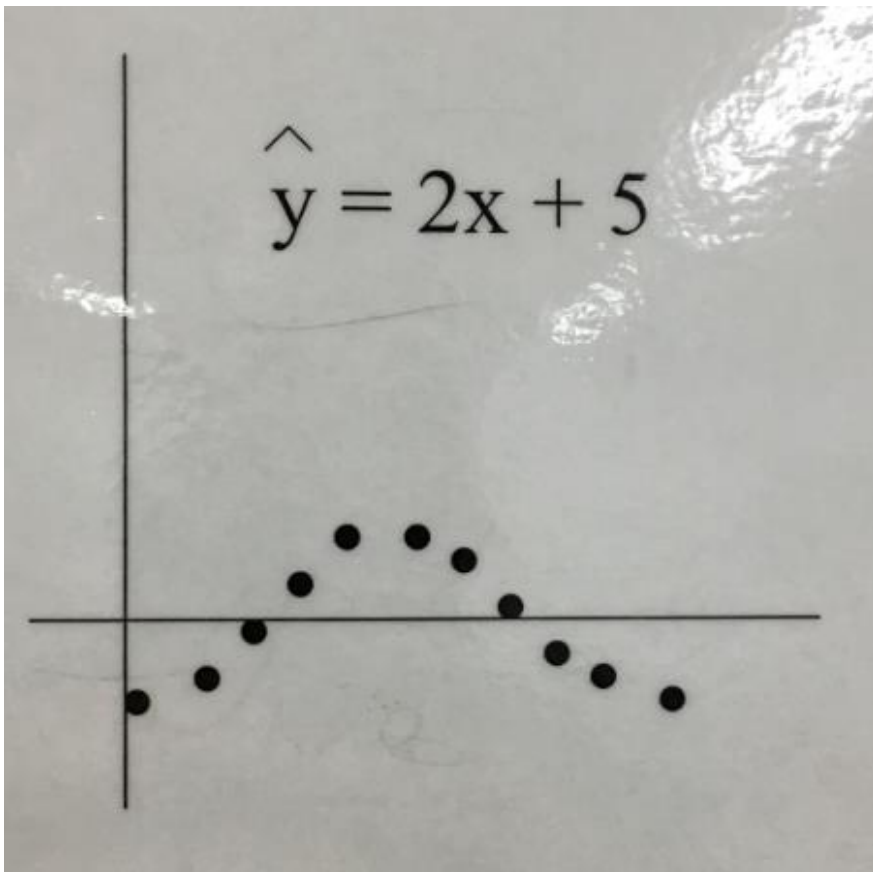
.91

The regression equation is $\hat{y} = -3x + 15$

Find the residual of the data point (6, 14)

$$\underline{y = -4x^2 + 25x + 55}$$

Based on the following residual plots,
which function fits better?



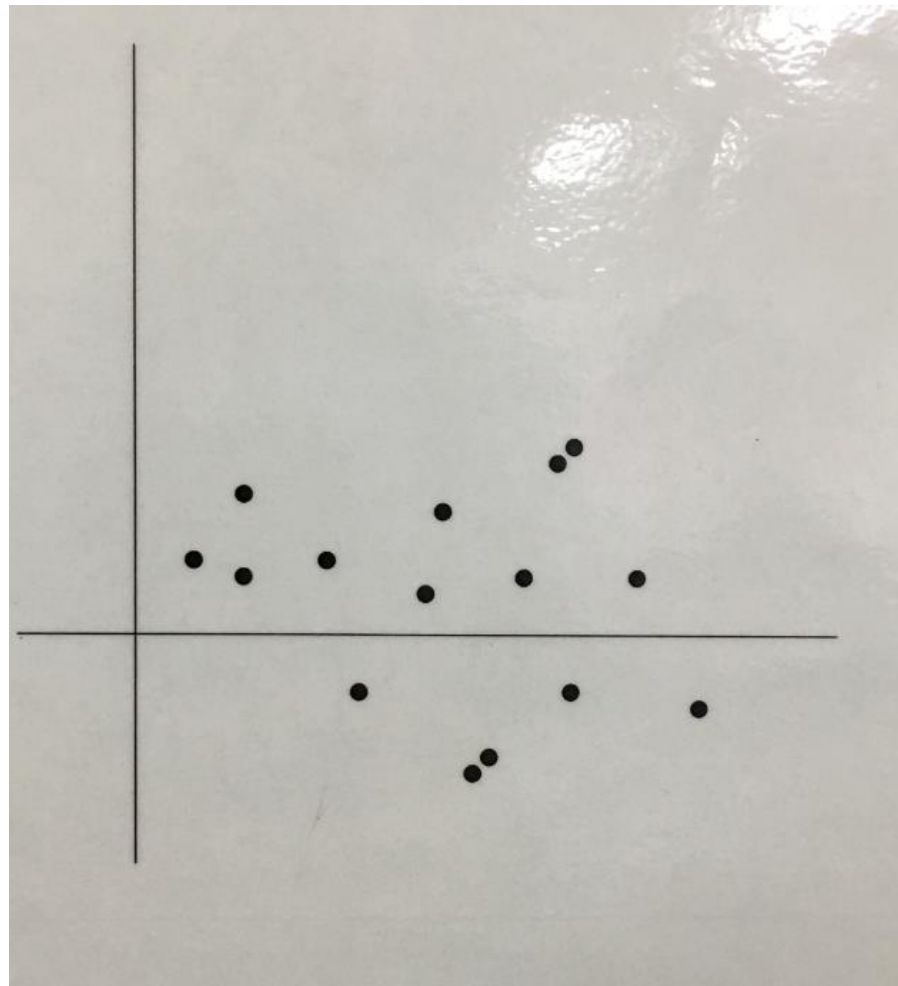
17

Calculate the value of the coefficient of
determination:

$$SS_{res}=5.8 \quad \text{and} \quad SS_{dev}=145$$

48

Analyze the residual plot to the right.
What does it tell you about the regression equation that was used for the data?



$$\hat{y} = .4(1.58)^x$$

Find the deviation of the point (4, 10)
from the following data points:

x	Y
1	3
2	7
3	16
4	22
5	28

850.75

Make a residual plot
of the data below
and tell whether or
not the regression
equation fits the
data well.

x	Y
1	323.8
2	324.8
3	325.9
4	327.2
5	328.1
6	329.6

$$\hat{y} = 1.148x + 322.546$$

$$\hat{y} = 1.6x + .9$$

Find the quadratic regression equation for the following data points:

x	Y
1	76
2	89
3	94

Residual plot random, good fit (from #13)

Find the
appropriate
equation for the
given data
algebraically

x	y
5	4
8	16
11	64
14	256

.96

Given the data below is an exponential function, find the value of y when $x = 10$

x	y
2	3
4	6
6	12