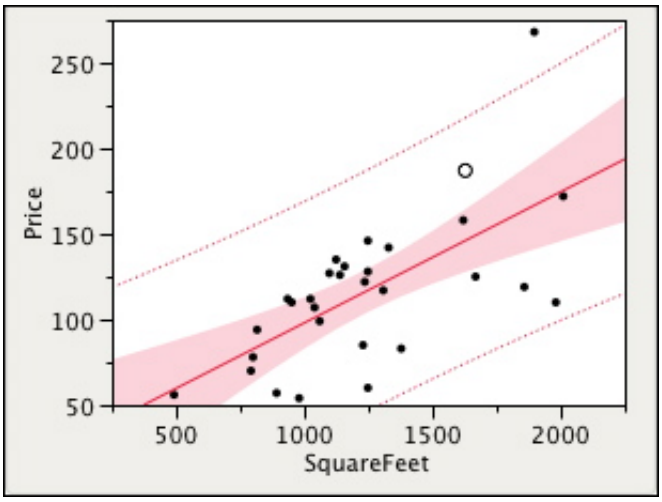
Chapter 10 Pre-Test

1 TAKE QUIZ 2 REVIEW 3 STUDY PLAN 4 LEARN!

Your response has been submitted successfully.

Points Awarded	**10**
Points Missed	**0**
Percentage	**100%**

1. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is a plot of the regression line:



Which of the following is correct?

A. The fitted line minimizes the sum of the squared vertical deviations between the predicted and actual values.

B. The fitted line minimizes the sum of the squared horizontal deviations between the observed and predicted values.

C. The least-squares line minimizes the sum of squares of the fitted values.

D. The least-squares line minimizes the square of the summed residuals.

Correct

Points Earned: 1/1

Your Response: A

2. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|	Lower 95%	Upper 95%
Intercept	21.398438	21.53829	0.99	0.3290	-22.72076	65.517632
SquareFeet	0.0765892	0.016646	4.60	<.0001*	0.0424921	0.1106863

Which of the following is correct?

A. The price is estimated to increase $77 for every additional square foot.
B. The price is estimated to increase $21 for every additional square foot.
C. The price is estimated to increase $4.6 for every additional square foot.
D. The price is estimated to increase $16 for every additional square foot.

Correct

Points Earned: 1/1

Your Response: A

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3. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

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Which of the following is correct?

A. Ninety-five percent of homes sell for between $42,000 and $110,000.
B. The smallest house sold for about $21,000.
C. The estimated increase in price for each additional square foot is between about $42 and $110.
D. The estimated price for the smallest home is less than about $66,000.

Correct

Points Earned: 1/1

Your Response: C

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4. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

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Which of the following is the fitted regression line?

A. SquareFeet = 21.3 + 0.077(Price)
B. SquareFeet = 0.077

C. Price = 21.4 + 0.077(SquareFeet)

D. Price = 0.077(intercept) + 0.017

Correct

Points Earned: 1/1

Your Response: C

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5. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

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The null hypothesis tested by the line labeled "SquareFeet" is:

A. the homes do not vary in their square footage.

B. the average selling price does not depend on the square footage.

C. the average home has a selling price that does not depend on the square footage.

D. the price per square foot is $76.

Correct

Points Earned: 1/1

Your Response: B

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6. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

Summary of Fit

RSquare	0.430554
RSquare Adj	0.410217
Root Mean Square Error	33.84516
Mean of Response	116.3333
Observations (or Sum Wgts)	30

Which of the following is correct?

A. The mean selling price is about $34,000.

B. The correlation between price and square footage is about 0.43.

C. The standard deviation about the regression line is about $34,000.

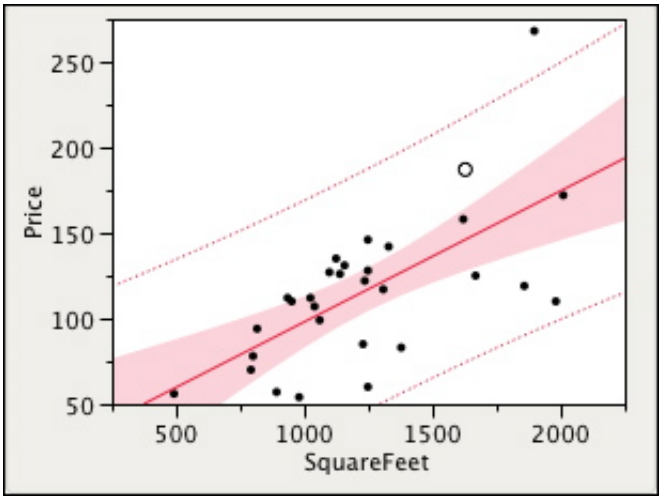
D. The margin of error is about $34,000.

Correct

Points Earned: 1/1

Your Response: C

7. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is a plot of the regression line:



The residual for the point indicated by a circle is about

A. 187.
B. 1600.
C. 150.
D. 40.

Correct

Points Earned: 1/1

Your Response: D

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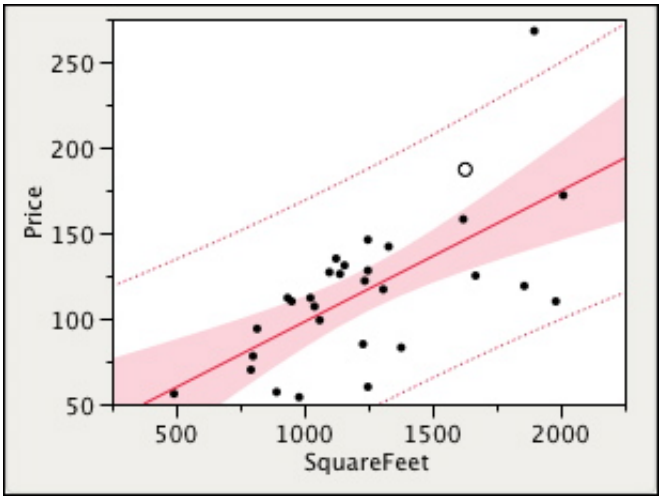

Which of the following is correct?

A. Exactly half of the fitted values will be above and half below the fitted line.
B. The spread of the points about the line should increase as the line goes up, and decrease as the line goes down.
C. About 95% of individual points should be within the shaded region.
D. The points are assumed to be approximately Normally distributed about the regression line.

Correct

Points Earned: 1/1

Your Response: D

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9. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is some information about the fit of the linear model:

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The estimated selling price of a home with 2000 square feet is:

A. $175,000.
B. $153,000.
C. $43,000.
D. $197,000.

Correct

Points Earned: 1/1

Your Response: A

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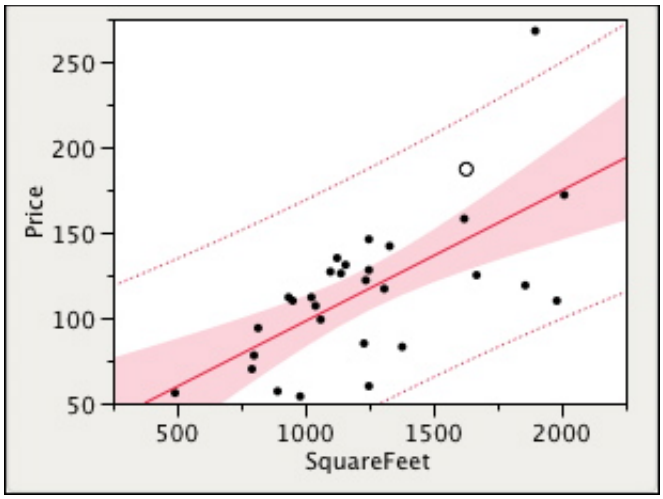
10. Larger homes tend to sell for more than smaller homes, but what, exactly, is the relationship between size and price? A sample of 30 homes that were recently sold was obtained along with the selling price ($1000s) and area (square feet). Here is a plot of the regression line:



The prediction interval for the price of a home that is about 1500 square feet is

A. (66, 206) thousands of dollars.
B. (120,150) thousands of dollars.
C. (66, 135) thousands of dollars.
D. (135,150) thousands of dollars.

Correct

Points Earned: 1/1

Your Response: A

VIEW STUDY PLAN