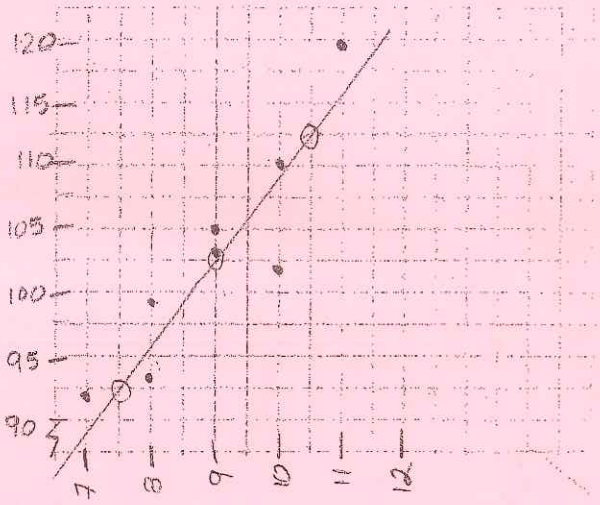
Linear Regression Pop Quiz Name: SOLUTION

Use the data below about a student's year in school (x) compared to the score the student earned on a college math entrance exam (y).

(8, 99) (10, 110) (9, 103) (7, 92) (8, 93) (9,105) (11,120) (10, 102)



1. Make a scatterplot of the information. (2 pt) ✓

2. Draw in your best-fit line. (1 pt) ✓

3. Write the equation of your line; (5 pt)
you must show me your work.

(10.5, 112.5) (9, 102.5)

$\frac{10}{1.5} = 6.67$ $112.5 = 6.67(10.5) + b$

$y = 6.67x + 42.47$ me

$y = 6.33x + 46$ calc.

4. If the score on the test was 88, about what grade would you predict for the test taker? (decimal values are OK) (2 pt)

$88 = 6.67x + 42.47$ grade 6.83

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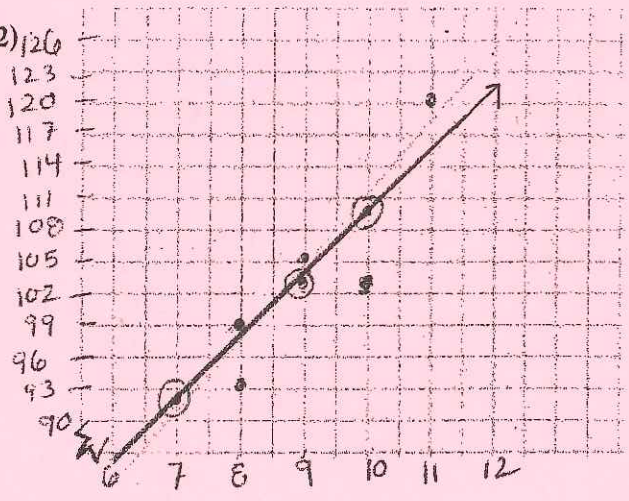

1. Make a scatterplot of the information. (2 pt) ✓

2. Draw in your best-fit line. (1 pt) (7,92) (10,110)

3. Write the equation of your line; (5 pt)
you must show me your work.

$\frac{110-92}{10-7} = \frac{18}{3} = 6$ $y = 6x + b$

$110 = 6(10) + b$

$50 = b$

$y = 6x + 50$

4. If the score on the test was 88, about what ~~grade~~ year would you predict for the test taker? (decimal values are OK) (2 pt)

$88 = 6x + 50$

$38 = 6x$

6.33 years