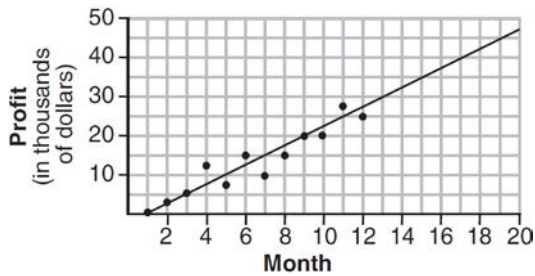


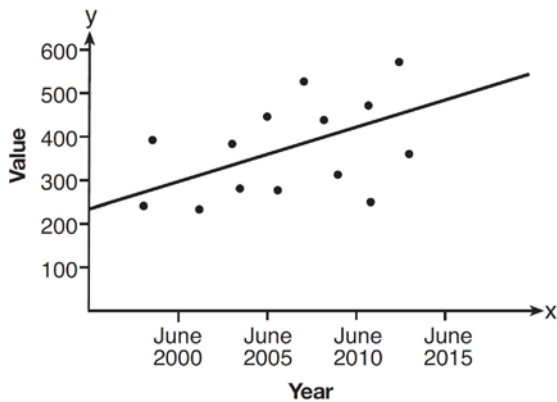
**S.ID.B.6: Scatter Plots 3a**

- 1 The scatter plot below shows the profit, by month, for a new company for the first year of operation. Kate drew a line of best fit, as shown in the diagram.



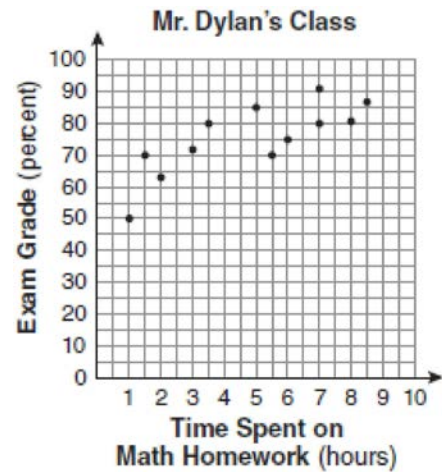
Using this line, what is the best estimate for profit in the 18th month?

- 1) \$35,000
  - 2) \$37,750
  - 3) \$42,500
  - 4) \$45,000
- 2 Based on the line of best fit drawn below, which value could be expected for the data in June 2015?



- 1) 230
- 2) 310
- 3) 480
- 4) 540

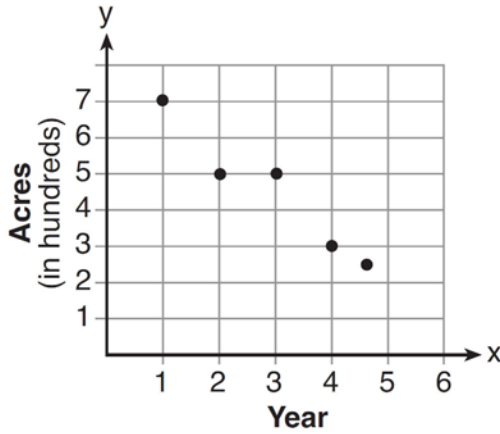
- 3 The number of hours spent on math homework each week and the final exam grades for twelve students in Mr. Dylan's algebra class are plotted below.



Based on a line of best fit, which exam grade is the best prediction for a student who spends about 4 hours on math homework each week?

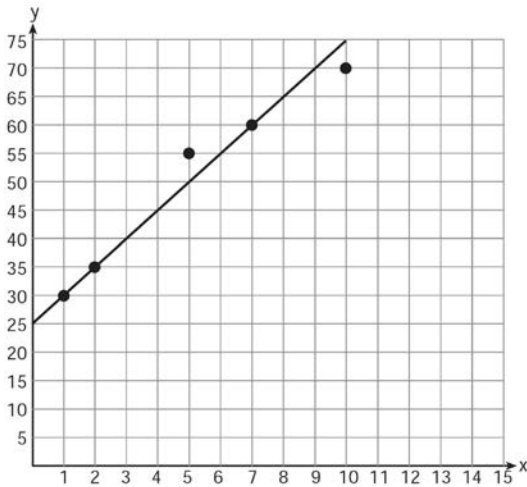
- 1) 62
- 2) 72
- 3) 82
- 4) 92

- 4 The graph below illustrates the number of acres used for farming in Smalltown, New York, over several years.



Using a line of best fit, approximately how many acres will be used for farming in the 5th year?

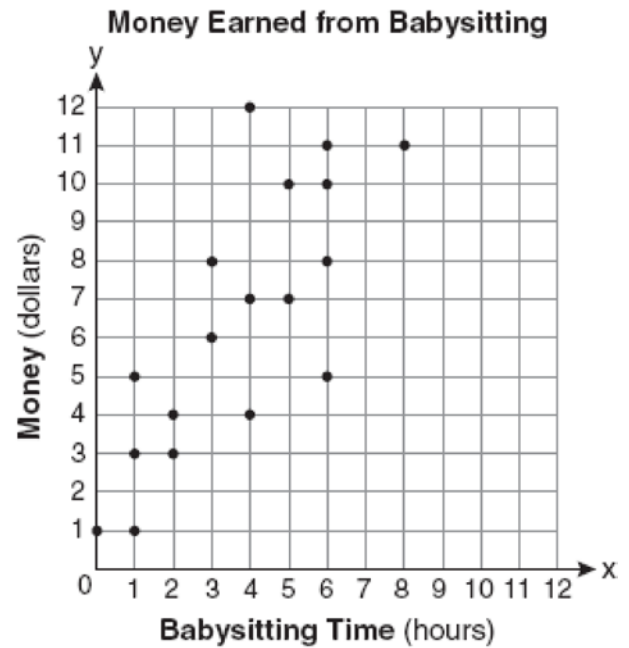
- 1) 0
  - 2) 200
  - 3) 300
  - 4) 400
- 5 A scatter plot was constructed on the graph below and a line of best fit was drawn.



What is the equation of this line of best fit?

- 1)  $y = x + 5$
- 2)  $y = x + 25$
- 3)  $y = 5x + 5$
- 4)  $y = 5x + 25$

- 6 Which equation most closely represents the line of best fit for the scatter plot below?



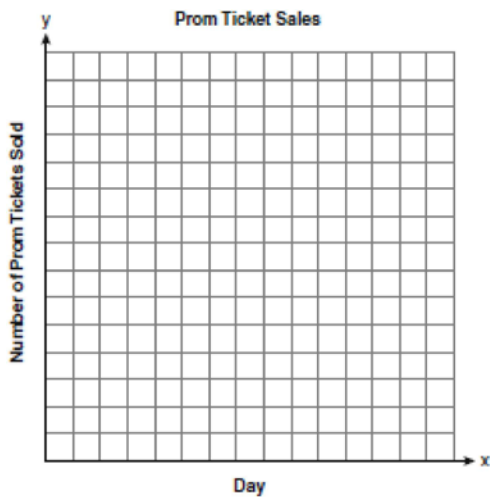
- 1)  $y = x$
- 2)  $y = \frac{2}{3}x + 1$
- 3)  $y = \frac{3}{2}x + 4$
- 4)  $y = \frac{3}{2}x + 1$

- 7 The table below shows the number of prom tickets sold over a ten-day period.

**Prom Ticket Sales**

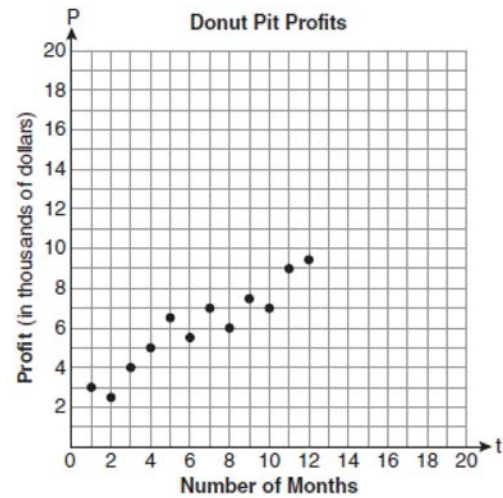
Day ( $x$ )	1	2	5	7	10
Number of Prom Tickets Sold ( $y$ )	30	35	55	60	70

Plot these data points on the coordinate grid below. Use a consistent and appropriate scale. Draw a reasonable line of best fit and write its equation.



- 8 Megan and Bryce opened a new store called the Donut Pit. Their goal is to reach a profit of \$20,000 in their 18th month of business. The table and scatter plot below represent the profit,  $P$ , in thousands of dollars, that they made during the first 12 months.

$t$ (months)	$P$ (profit, in thousands of dollars)
1	3.0
2	2.5
3	4.0
4	5.0
5	6.5
6	5.5
7	7.0
8	6.0
9	7.5
10	7.0
11	9.0
12	9.5



Draw a reasonable line of best fit. Using the line of best fit, predict whether Megan and Bryce will reach their goal in the 18th month of their business. Justify your answer.

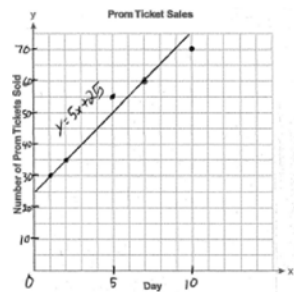
**S.ID.B.6: Scatter Plots 3a**  
**Answer Section**

- 1 ANS: 3 REF: 081208ia
- 2 ANS: 3 REF: 061303ia
- 3 ANS: 2 REF: 080930ia
- 4 ANS: 2 REF: 011411ia
- 5 ANS: 4 REF: 011229ia
- 6 ANS: 4



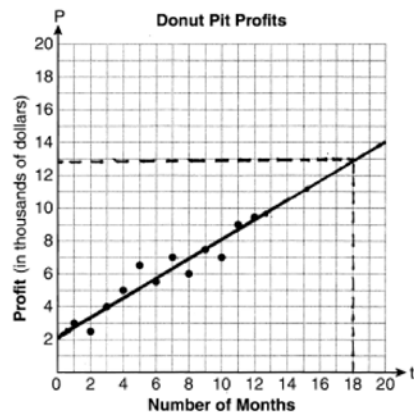
REF: 080822ia

- 7 ANS:



REF: 060936ia

- 8 ANS:



They will not reach their goal in 18 months.

REF: 061036ia