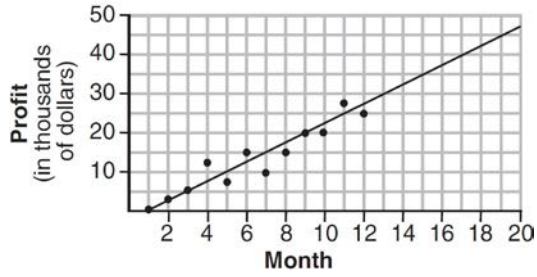
Name: _____

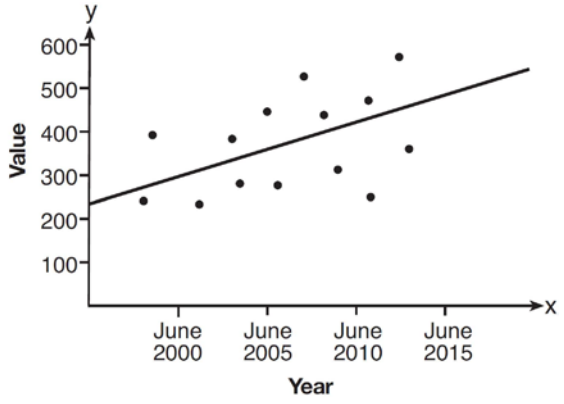
S.ID.B.6: Scatter Plots 3b

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.

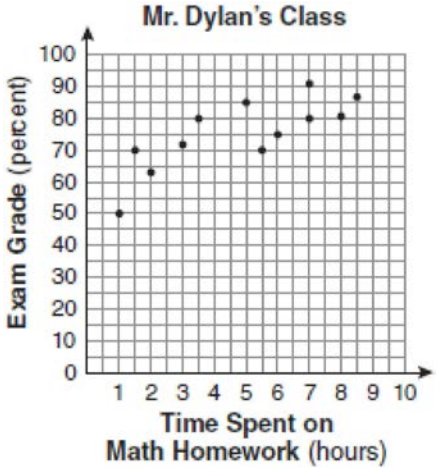


Using this line, what is the best estimate for profit in the 18th month?

2 Based on the line of best fit drawn below, which value could be expected for the data in June 2015?



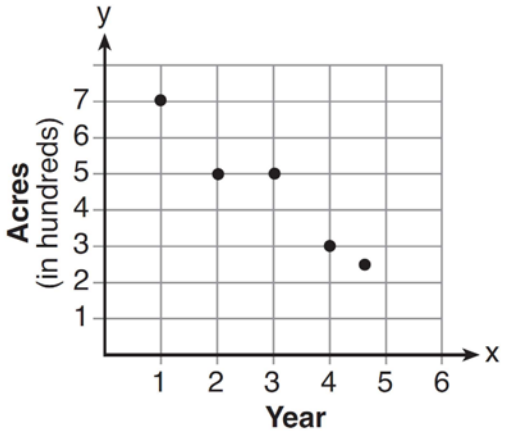
3 The number of hours spent on math homework each week and the final exam grades for twelve students in Mr. Dylan's algebra class are plotted below.



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?

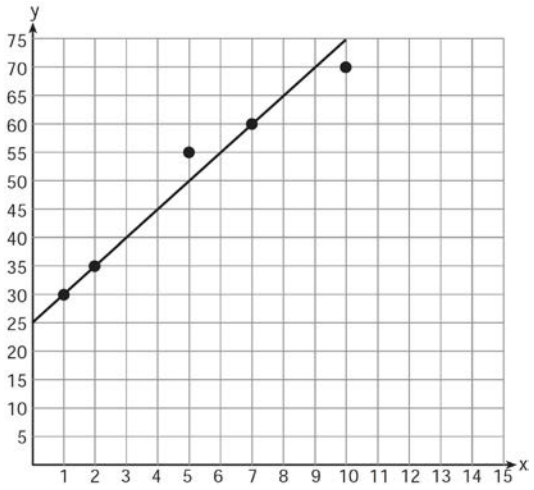
Name: _____

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



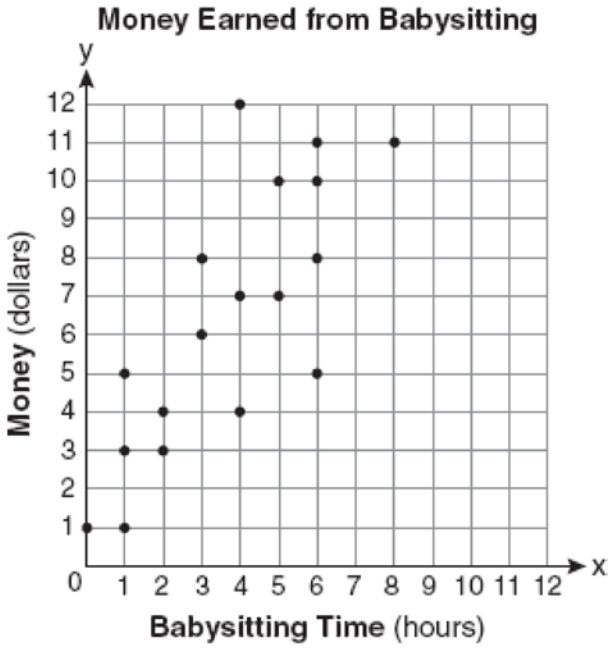
Using a line of best fit, approximately how many acres will be used for farming in the 5th year?

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?

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



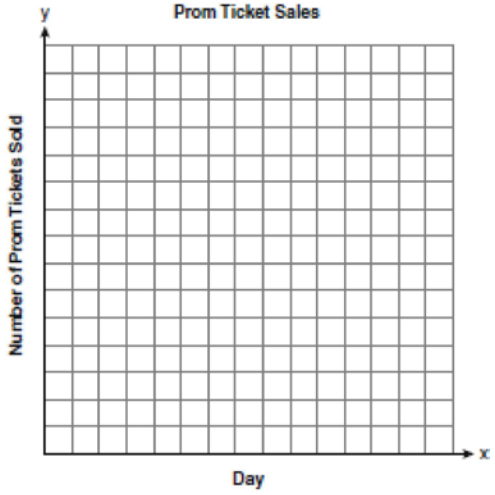
Name: _____

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

Prom Ticket Sales

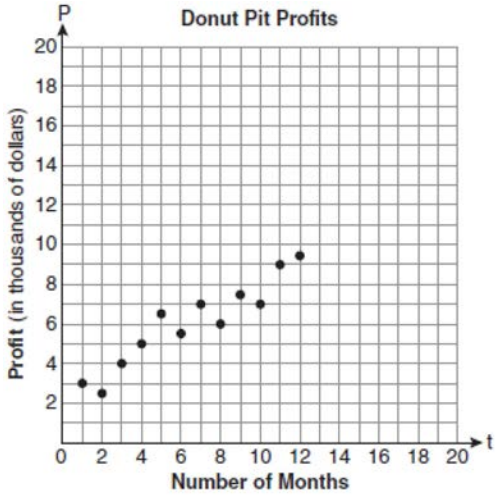
Day (x)	1	2	5	7	10
Number of Prom Tickets Sold (y)	30	35	55	60	70

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 3b
Answer Section

1 ANS:
$42,500

REF: 081208ia

2 ANS:
480

REF: 061303ia

3 ANS:
72

REF: 080930ia

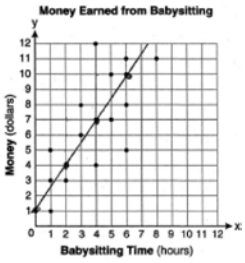
4 ANS:
200

REF: 011411ia

5 ANS:
$y = 5x + 25$

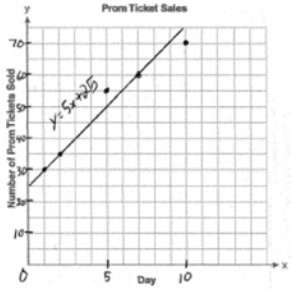
REF: 011229ia

6 ANS:
$y = \frac{3}{2}x + 1$



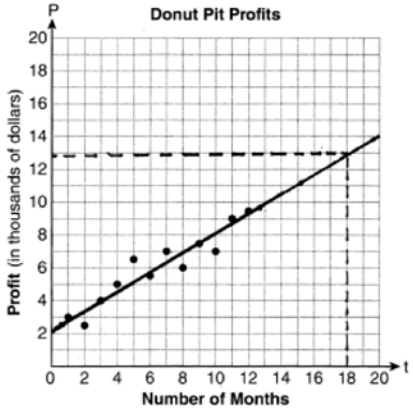
REF: 080822ia

7 ANS:



REF: 060936ia

8 ANS:



They will not reach their goal in 18 months.

REF: 061036ia