Name: _____

Applications of Linear Systems

1) A lending library has a fixed charge for the first three days and an additional charge for each day thereafter. Martha paid 27 Dhm for a book kept for seven days, while Suzy paid 21 Dhm for the book she kept for five days. Find the fixed charge and the charge for each extra day.

2) Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds, they meet in 5 hours. If they travel towards each other, they meet in 1 hour. What are the speeds of the two cars?

3) The area of a rectangle gets reduced by 9 square units, if its length is reduced by 5 units and breadth is increased by 3 units. If we increase the length by 3 units and the breadth by 2 units, the area increases by 67 square units. Find the dimensions of the rectangle.

4) Yasser scored 40 marks in a test, getting 3 marks for each right answer and losing 1 mark for each wrong answer. Had 4 marks been awarded for each correct answer and 2 marks been deducted for each incorrect answer, then Yasser would have scored 50 marks. How many questions were there in the test?