**Name:** _____

# Applications of Linear Systems

1) The coach of a cricket team buys 7 bats and 6 balls for 3800 Dhm. Later, she buys 3 bats and 5 balls for 1750 Dhm. Find the cost of each bat and each ball.

2) The taxi charges in a city consist of a fixed charge together with the charge for the distance covered. For a distance of 10 km, the charge paid is 105 Dhm and for a journey of 15 km, the charge paid is 155 Dhm. What are the fixed charges and the charge per km? How much does a person have to pay for travelling a distance of 25 km?

3) A fraction becomes $\frac{9}{11}$ , if 2 is added to both the numerator and the denominator. If, 3 is added to both the numerator and the denominator it becomes $\frac{5}{6}$ . Find the fraction.

4) Five years later, the age of Jacob will be three times that of his son. Five years ago, Jacob's age was seven times that of his son. What are their present ages?

5) Form the pair of linear equations in the following problems, and find their solutions (if they exist) by the elimination method :

   1) If we add 1 to the numerator and subtract 1 from the denominator, a fraction reduces to 1. It becomes1/2 if we only add 1 to the denominator. What is the fraction?

   2) Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as Sonu. How old are Nuri and Sonu?

   3) The sum of the digits of a two-digit number is 9. Also, nine times this number is twice the number obtained by reversing the order of the digits. Find the number.

   4) Mena went to a bank to withdraw 2000 Dhm. She asked the cashier to give her 50 Dhm and 100 Dhm notes only. Mena got 25 notes in all. Find how many notes of 50 Dhm and 100 Dhm she received.