

**Q8 (10 Marks)** A family has a \$130000, 25 year mortgage at 4.2% compounding monthly.

- a) Find the monthly payment.
- b) Find the unpaid balance after 15 years.
- c) Find the total amount of interest paid on the mortgage.

**Q9 (10 Marks)** A car rental company has 4 red cars and 5 blue cars.

- a) In how many ways can a fleet of 3 cars be selected.
- b) If the fleet of 3 cars is selected at random, what is the probability that all the cars are blue?
- c) If the fleet of 3 cars is selected at random, what is the probability that 1 is blue and the other 2 are red?

**Q10 (10 Marks)** The board of directors of a company consists of 6 women and 4 men.

- a) If the Chair and Vice-Chair of the board are selected at random, what is that probability that both are women?
- b) If the members of a 3 person committee are selected at random, what is the probability that the majority of members are men?