S6 SHORT CLASS TEST

TIME: 1 HOUR

Test your selves wherever you are.

1. The table below shows the mean and standard deviation of the weights of some turkeys and geese.

	No. of birds	Mean(kg)	Standard deviation(kg)
Turkeys	9	7.5	1.54
Geese	15	5.4	0.94

(i) Find the mean weight of all the 24 birds.

(ii) Calculate the standard deviation of the weights of the 24 birds.

2. In a certain country 68% of households have a printer.

(a) Find the probability that in a random sample of 8 households, 5, 6 or 7 households have a printer.

(b) Determine the probability that in a random sample of 500 households, more than 337 have a printer.

3. The lengths of cars in a city are normally distributed with mean μ and standard deviation 0.714. The probability that a randomly chosen car has a length more than 3.2 m and less than μ m is 0.475. Find the value of μ.

4. A uniform ladder of mass 10 kg and length 4 m is placed on a rough horizontal floor and against a smooth vertical wall. A student of weight 620 N climbs up the ladder. The ladder makes an angle of 60^0 with the horizontal and the coefficient of friction between the floor and the ladder is 0.25.

How far up the ladder can the student go before the ladder starts to slip?