

## 04b Sample Examination Problems Chapter 5

1. Write down the sample space of samples of size two without replacement from the population of three persons A, B and C.
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2. Show that the variance of the mean of a random sample of size  $n$  taken from a large population is equal to the population variance divided by the sample size.
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3. Show that the mean of the binomial distribution with  $n$  trials and probability of success  $\pi$  has mean  $n\pi$  and variance  $n\pi(1 - \pi)$ .