**6B The Binomial Distribution**

1. Gary is playing chess against Nigel, and has a chance of winning each game.
2. If they play 5 games, what is the probability of Gary winning exactly 3?
3. Find the term containing in the following expansion:
4. If the probability of Gary winning a chess match is , find the probability of him winning exactly 3 games out of 5
5. Give the probability distribution of in table form.

Notes:

1. Gary is playing chess against Nigel, and has a chance of winning each game. If they play 5 games, what is the probability of Gary winning exactly 3?
2. The random variable . Find:
3. The probability that a randomly chosen member of a reading group is left-handed is 0.15. A random sample of 20 members of the group is taken.
4. Suggest a suitable model for the random variable , the number of members in the sample who are left handed. Justify your choice.
5. Use your model to calculate the probability that:
6. Exactly 7 sample members are left handed
7. Less than two members are left-handed