

The probability that a couple will have a child with black hair is 0.6.

If this couple has 7 children what is

- (a) the probability that exactly 3 of these children have black hair ?
- (b) the probability that no more than 2 of their children have black hair ?
- (c) the probability that none of the children have black hair
- (d) what is the mean number of their children that have black hair and what is the variance ?