

## HW # 7 due March 13, 2009

1. According to a simple genetic principle, if both the mother and father of a child have genotype  $Aa$ , then there is probability 25% that the child will have genotype  $AA$ , there is probability 50% that it will have genotype  $Aa$ , and there is probability 25% that it will have genotype  $aa$ . In a random sample of 25 children having both parents with genotype  $Aa$ , it is found that 11 have genotype  $AA$ , 10 have genotype  $Aa$ , and 4 have genotype  $aa$ . State your null and alternate hypotheses. Investigate whether the simple genetic principle is correct by carrying out a Chi-square goodness-of-fit test and draw conclusion.
2. Page 156 #4.4
3. Page 156 #4.6