

Goodness-of-fit test - example

The Mendelian theory states that the number of certain type of peas falling into the classifications round and yellow, wrinkled and yellow, round and green, and wrinkled and green should be in the ratio $9 : 3 : 3 : 1$. Suppose that 100 such peas revealed 56, 19, 17, and 8 in the respective classes. Are these data consistent with the model? Use $\alpha = 0.05$. Note: The expression $9 : 3 : 3 : 1$ means that $\frac{9}{16}$ of the peas should be round and yellow, etc.