**1.Covariance and correlation**

**Children of three ages are asked to indicate their preference for three photographs of adults. Do the data suggest that there is a significant relationship between age and photograph preference? What is wrong with this study?**

**Photograph:**

**Age of child A B C**

**5-6 years: 18 22 20**

**7-8 years: 2 28 40**

**9-10 years: 20 10 40**

**1. Use cov() to calculate the sample covariance between B and C.**

**2. Use another call to cov() to calculate the sample covariance matrix for the preferences.**

**3. Use cor() to calculate the sample correlation between B and C.**

**4. Use another call to cor() to calculate the sample correlation matrix for the preferences.**

