

Two soft drink machines dispense liquids of 10 ounces, on the average. The question is whether the two machines are equally consistent (i.e., equally variable) in the dispensing of the liquid. To answer this question, a sample of size 10 was obtained from each machine and the sample standard deviations were computed to be $s_1 = 1.87$ ounces and $s_2 = 1.25$ ounces. Perform the appropriate test for equality of variances using $\alpha = 0.05$.

[HINT: If X and Y are independent χ^2 random variables with n_1 and n_2 df respectively, then X/Y follows an $F(n_1, n_2)$ distribution.]