

1. Bulmer: Problem 3.1

2. Bulmer: Problem 3.2

3. Bulmer: Problem 3.3

4. Simulate the uniform distribution in STATA:

```
set obs 10000
```

```
gen u1 = uniform()
```

(a) Calculate the mean, the variance, and the skew of the simulated distribution using the summarize command. (b) Calculate the theoretical mean, variance and skew.

5. (a) Transform the variable using the square of u1. What are the mean, variance, and skew of the simulated distribution? (b) Transform the variable using the square root of u1. What are the mean, variance and skew of the distribution?