**Name:**                                                                **SB ID:**

Find the radius of convergence and the interval of convergence for the following power series. Answers without justification will get no partial credit.

**1.**

$$\sum_{n=1}^{\infty} \sqrt{n}x^n$$

**2.**

$$\sum_{n=1}^{\infty} \frac{x^n}{n3^n}$$