3. [10 points]

a. [6 points] Determine the **radius** of convergence for the following power series. Show all of your work. You do not need to find the interval of convergence.

$$\sum_{n=1}^{\infty}(-1)^n\frac{4^{n+1}}{n^{1/3}}(x-1)^n$$

b. [4 points] Suppose the power series $\sum_{n=0}^{\infty} C_n(x-a)^n$ has radius of convergence 2, and that the series converges for $x=4$ and diverges for $x=6$. Which of the following could be the value of a? List **all** correct answers.

0 1 2 3 4 5 6