Name: _____

Whooping cough was thought to have been almost wiped out by vaccinations. It is now known that the vaccination wears off, leading to an increase in the number of cases, w, from 1248 in 1981 to 18,957 in 2004.

1. With t in years since 1980, find an exponential function that fits this data.

2. What does your answer to the previous question give as the average annual percent growth rate of the number of cases?

3. On May 4, 2005, the *Arizona Daily Star* reported that the number of cases had more than doubled between 2000 and 2004. Does your model confirm this report? Explain.