

7.1 Model Exponential Growth Functions Notes

1) In 1996, there were 2573 computer viruses and other computer security incidents. During the next 7 years, the number of incidents increased by about 92% each year.

a) Write an exponential growth model giving the number n of incidents t years after 1996.

b) About how many incidents were there in 2003?

c) Graph the model.

d) Use the graph to estimate the year when there were about 125,000 computer security incidents.

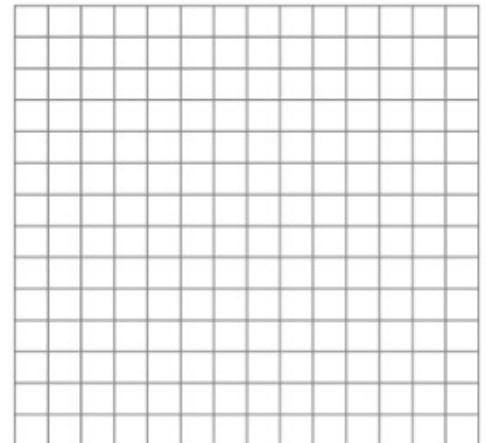


2) In 1977, there were 41 breeding pairs of bald eagles in Maryland. Over the next 24 years, the number of breeding pairs increased by about 8.9% each year.

a) Write a model giving the number n of breeding pairs of bald eagles in Maryland t years after 1977.

b) Make a table of values for the model.

c) Graph the model.



d) Use the graph to estimate how many breeding pairs of bald eagles were in Maryland in 1992.

3) In the exponential growth model $y = 527(1.39)^x$, identify the initial amount, the growth factor, and the percent increase.

4) You deposited \$4000 in an account that pays 2.92% annual interest. Find the balance after 1 year if the interest is compounded with the given frequency.

a) Quarterly

b) Daily

5) You deposited \$2000 in an account that pays 4% annual interest. Find the balance after 3 year if the interest is compounded daily.