

Math 1743 - Math Center Worksheet

Section 1.5

1. In 1995, an investment was worth \$3,750 and in 1996 it was worth \$4,195.
a. Find the percentage change. Round your percent to the nearest tenth.

b. Write the complete exponential model for this situation.

c. How many years after 1995 will the investment be worth \$5000? Round to the nearest tenth.

2. The table shows the percent of traffic accidents investigated by the Ohio State Highway Patrol that were fatal crashes from 1991 through 1995:

Year	1991	1992	1993	1994	1995
Fatal Crashes (percent)	0.93726	0.79979	0.78622	0.70377	0.67086

a. Find the complete exponential model for the data, aligning input with 1991.

b. What percent of crashes were fatal in 1998?

Math 1743 - Math Center Worksheet

Section 1.8

The following table gives the percentage of rental-housing units in the United States that were vacant during the third quarter of each of the selected years.

year	1978	1980	1985	1989	1991	1996	1998	2001
Rental vacancy rate (percent)	5.0	5.7	6.8	7.3	7.6	8.0	8.2	8.4

a. Find a complete logarithmic model, $f(x)$ for this data.

b. Find and interpret $f(10)$.

c. When will the percentage of US rental-housing units vacant during the third quarter be equal to 9%? Round your year to the nearest tenth (e.g. 1997.6).

Math 1743 - Math Center Worksheet

Section 1.10

The personnel manager for a contracting company keeps track of the total number of labor hours spent on a construction job each week during the construction.

Weeks after project begins	1	4	7	10	13	16	19
cumulative labor hours	25	158	1254	5633	9280	10010	10100

- Find a complete logistic model, $h(w)$ for this data.
- Find and interpret $h(15)$.
- Use limit notation to describe the end behavior of the graph of this model.