

## Unit 8.2 Homework Answers

1a.  $P = 494,290(1.03)^t$

1b. 664,284

1c. 2014

2a.  $V = 200(.75)^t$

2b. \$84.38

2c. after 2.5 years

3a.  $P = 48.28(1.06)^t$

3b. \$64.61

3c. 2013

4a.  $p = 50(1.105)^n$

4b. \$82.37

4c. \$1,084,420.72, no – 100 exceeds given domain

5.  $2.06 \times 10^{15}$

6a. \$24,000

6b. 15.5%

6c. after about 5 years

6d. \$5.29, The car would not last 50 years, and if it did it would be a collector's item and the value would increase.

7a.  $A = 100\left(\frac{1}{2}\right)^{t/5730}$

7b. 29.8%

7c. 8219 years

8. .03125 g

9. 1.125 g

10.  $9 \times 10^9$  years

11. 3 mg

12a.  $H = 100(.98)^t$

12b. 68.1%

12c. No, horizontal asymptote, will never reach zero.

13.  $V = 1300(0.678)^t$

14a. 11.6%

14c. \$15,582.79