Lesson 4.1/4.6 Worksheet #2

Compound Interest	Continuous Interest	Population Growth
$A = P \left(1 + \dfrac{r}{n}\right)^{nt}$	$A = Pe^{rt}$	$A = Pe^{rt}$

Use your interest formulas to complete each problem.

1) $46,000 at 14% compounded semiannually for 7 years

2) $27,000 at 9.1% compounded continuously for $5\frac{1}{2}$ years

3) $275 at 3.9% compounded continuously for $2\frac{1}{2}$ years

4) $40,800 at 4% compounded quarterly for $4\frac{1}{2}$ years

5) $35,700 at 9.3% compounded quarterly for $1\frac{1}{2}$ years

6) $3,000 at 13.6% compounded continuously for 2 years

7) $425 at 4.1% compounded continuously for 2 years

8) $52,700 at 14.8% compounded semiannually for $8\frac{1}{2}$ years

Use the interest formulas to determine how much interest was earned.

9) Your investment started with $33,100, and was compounded continuously for 5 years at a rate of 3%. How much interest did you earn?

10) Your investment started with $56,300, and was compounded quarterly for $1\frac{3}{4}$ years at a rate of 6%. How much interest did you earn?

Find the population growth.

11) The population of Henderson City was 3,381,000 in 1994, and is growing at an annual rate of 1.8%. If this growth continues, what will the approximate population of Henderson City be in the year 2000?
   a. 3,696,000
   b. 3,763,000
   c. 3,798,000
   d. 3,831,000

12) The population of a city grows at a rate of 5% per year. The population of the city was 400,000 in 1990. What will the approximate population of the city be for this year?