## Algebra II Review Unit 10 page 1

Find the exact value of each of the following. Express irrational numbers using standard radical form. (No calculators are to be used on this page.)

1. $2^{-4}=$
2. $(-1)^{25}=$
3. $(-2)^{3}=$
4. $25^{\frac{1}{2}}=$
5. $27^{\frac{2}{3}}=$
6. $3^{\frac{1}{3}}=$
7. $2^{\frac{-1}{2}}=$
8. $9^{1.5}=$
9. $12^{0.5}=$
10. $\left(\frac{1}{8}\right)^{\frac{1}{1}}=$
11. $\left(\frac{2}{9}\right)^{\frac{1}{2}}=$
12. $\left(\frac{3}{8}\right)^{\frac{-2}{3}}=$

## Algebra II Review Unit 10 page 2

(Calculators are needed on this page.)
16. $\$ 1000$ is invested in an account paying interest at an annual rate of $3 \%$ compounded quarterly. Express the balance of the account, A, as a function of the time, t , in years. Graph this function for values of t from 0 to 20 years. Label your graph with its equation.
function: $\qquad$
17. $\$ 800$ is invested in an account paying interest at an annual rate of $6.5 \%$ compounded daily. Express the balance of the account, A, as a function of the time, t , in years. Graph this function for values of t from 0 to 20 years. Label your graph with its equation.
function: $\qquad$


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(Calculators are needed on this page.)
18. A certain radioactive substance with a mass of 2900 grams has a half-life of eight years. Express its mass, Q , as a function of time, t , in years. Graph this function for values of t from 0 to 20 years. Label your graph with its equation.
function: $\qquad$
19. A certain radioactive substance with a mass of 1500 grams has a half-life of twenty years. Express its mass, Q , as a function of time, t , in years. Graph this function for values of t from 0 to 20 years. Label your graph with its equation.
function: $\qquad$


## Algebra II Review Unit 10 page 4

20. $\$ 1000$ is invested in an account paying interest at an annual rate of $4.5 \%$ compounded continuously. Express the balance of the account, A, as a function of the time, $t$, in years. Graph this function for values of t from 0 to 20 years.
function: $\qquad$
21. $\$ 600$ is invested in an account paying interest at an annual rate of $7 \%$ compounded continuously. Express the balance of the account, A, as a function of the time, $t$, in years. Graph this function for values of $t$ from 0 to 20 years.
function: $\qquad$

