General Algebra 2 Review Unit 11 page 1 _____

Find the exact value of each of the following. Express irrational numbers using standard radical form. (Calculators are not 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. $16^{\frac{-1}{2}} =$

7. $9^{1.5} =$

8. $3^{\frac{1}{3}} =$

9. $2^{\frac{-1}{2}} =$

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Find the exact value of each of the following. Express irrational numbers using standard radical form. (Calculators are not to be used on this page.)

10. $12^{0.5} =$

11. $\left(\frac{-2}{3}\right)^{3} =$

12. $\left(\frac{2}{3}\right)^{-3} =$

13. $\left(\frac{1}{8}\right)^{\frac{1}{3}} =$

14. $\left(\frac{2}{9}\right)^{\frac{1}{2}} =$

15. $\left(\frac{3}{8}\right)^{\frac{-2}{3}} =$

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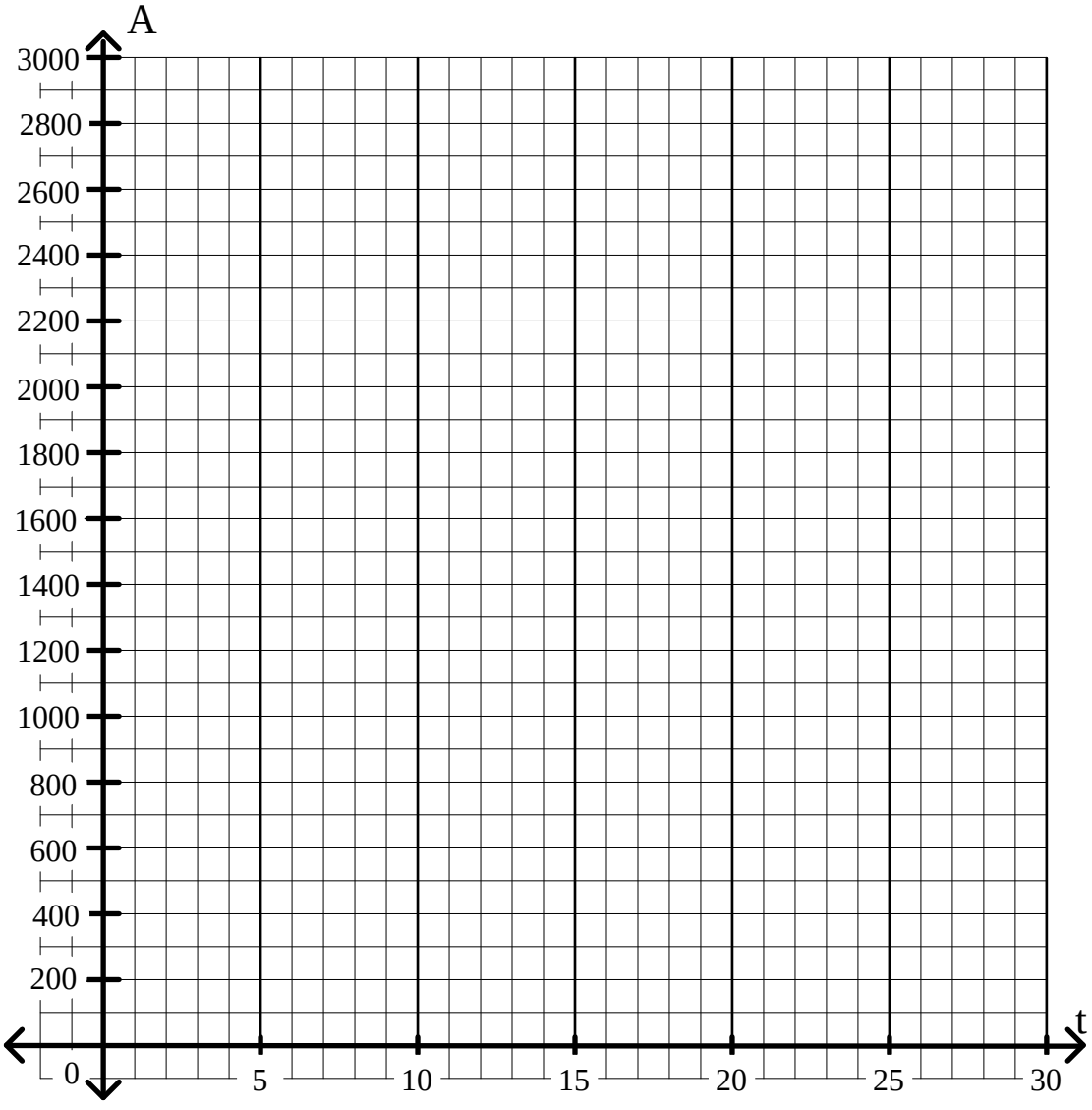
(Calculators are needed on this page.)

16. $900 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 30 years. Label your graph with its equation.

function: _____

17. $500 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 30 years. Label your graph with its equation.

function: _____



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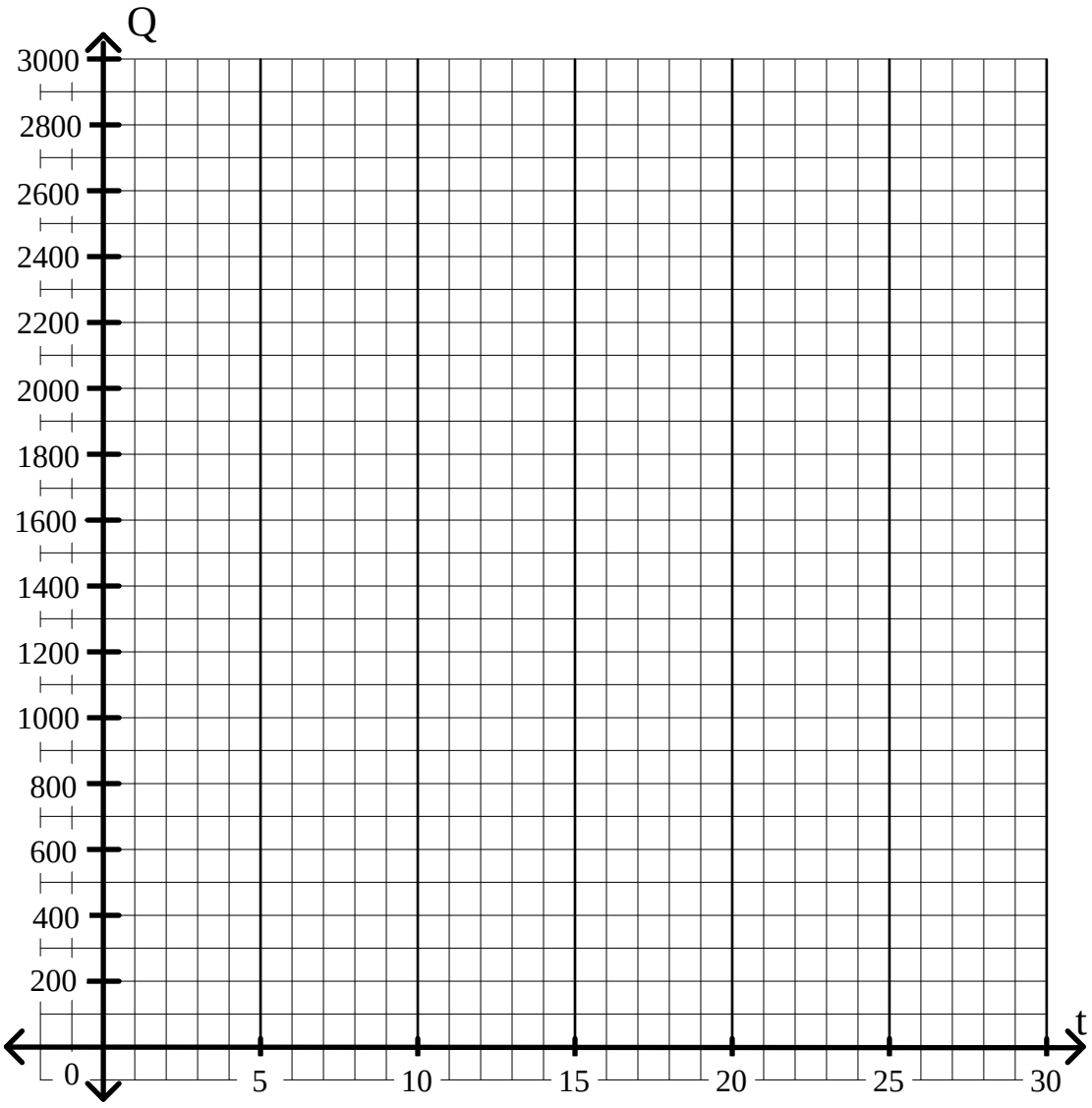
(Calculators are needed on this page.)

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 30 years. Label your graph with its equation.

function: _____

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 30 years. Label your graph with its equation.

function: _____



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(Calculators are needed on this page.)

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 30 years.

function: _____

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 30 years.

function: _____