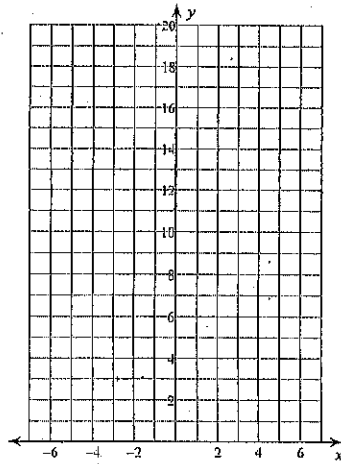


GGG test

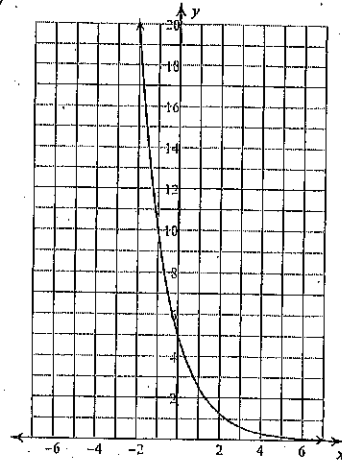
Sketch the graph of the function.

1) $y = \frac{1}{3} \cdot 6^x$



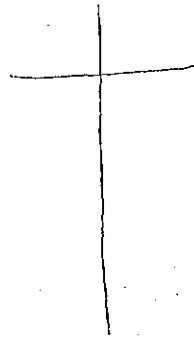
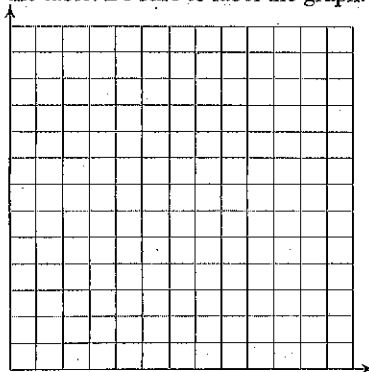
Write an equation for graph.

2)



Use for #3-4: Ray is a contestant on a quiz show. He wins \$500 for being selected as a contestant. Every time he answers a question correctly, his winnings double.

3) Complete the table to show Ray's winnings after each correct answer. Then graph the data from the table. Be sure to label the graph.



4) Write an equation for the relationship between the number of correct answers C, and the winnings W. How many questions must Ray answer correctly to win over \$1,000,000?

Simplify. Write each answer in scientific notation.

5) $(7.9 \times 10^6)(5 \times 10^{-2})$

6) $\frac{1.55 \times 10^5}{2.61 \times 10^6}$

Simplify. Your answer should contain only positive exponents.

7) $4x^3y^4 \cdot x^2$

8) $x^4 \cdot (2x^2y^0)^2$

9) $\frac{v^4 \cdot (2uv^3)^{-1}}{2u^2v^3}$

10) $\frac{2n^4 \cdot 2n^4}{(2n^{-3})^4}$

Use for #11-12: You deposit \$2500 in a savings account that earns interest of 3% per year on the current balance in the account.

11) What will the value of your investment be at the end of 10 years? Write an equation to solve and define your variables

12) How many years will it take for your account to double?

Use for #13-16: There are 64 basketball teams entered into the March Madness bracket. In the 1st round of play, each team plays one other team, so 32 games will be played in the first round of the single elimination tournament. The winners of these games play each other in the second round. The winners of the second round play each other in the third round...This continues until there is a winning team.

13) Find an exponential equation for the number of teams left in the tournament after each round. Define your variables.

14) How many rounds of play are needed before a winner is determined? Explain

15) How many total games are played before a winner is determined? Explain

16) Suppose an additional round of play is added to the playoffs. How many teams would start in the playoffs? Explain