

- 1.) The cost of a High Definition television now averages \$1200, but the cost is decreasing about 15% per year. Write an equation to represent this situation.

In how many years will the cost be under \$500?

- 2.) The ticket prices at African Safari Land have increased annually according to the following table. Write an equation that represents the table.

Year	0	1	2	3
Price (\$)	50	55	60.50	66.55

If the ticket prices continue to grow at the same rate, what is the ticket price in 8 years?

- 3.) An investment of \$1400 earns 8% annual interest, compounded quarterly. Write an equation to represent this situation.

Find the value of your investment at 6 years.

- 4.) Katya treated everyone in theater to a pizza party. She bought 12 pizzas and six 2-liters of soda. The bill was \$137.64 (before tax). The night before, Katya had bought one pizza and one 2-liter of soda for her family, and the bill was \$11.95 (before tax). How much was each pizza? How much was each 2-liter of soda?

Don't Forget to: Define your variables, write two equations, show your work, and put your final answer in a sentence.

5.) Consider the two points (1, 36) and (3, 1.44).

a. Use an algebraic method to write the equation of a line passing through points (1, 36) and (3, 1.44).

b. Write the equation of an exponential function passing through points (1, 36) and (3, 1.44).

6.) Write each expression below as a simplified expression without negative exponents.

$$\frac{g^3 h^2 h^3}{(g^9)^{-2} h^7}$$

$$\frac{2k^{-5} m^0}{(k^4)^{-2} m^2}$$

$$\left(\frac{1}{8w}\right)^{-2}$$

$$\left(\frac{p}{3}\right)^{-4}$$

7.) Write each expression below in radical form and compute the value without using a calculator. Show necessary work.

$$8^{1/3}$$

$$16^{3/4}$$

$$125^{4/3}$$