

Algebra in the real world and everyday life essay sample



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Algebra is used repeatedly in business and science for professions ranging from accountants to astronomers and physicists. The fundamental algebraic equation in accounting is $\text{assets} = \text{liabilities} + \text{capital}$. Accountants use this equation to balance the books. They also use algebra to calculate journal entries for interest payments and depreciation (Moore, n. d.). To analyze and work with numbers, accountants also need to understand positive and negative numbers, fractions and decimals. Other businesses that use algebra include retail stores, car dealerships and restaurants to name just a few. Each of these types of businesses sells a product and needs to calculate percentage discounts, sales or meals tax and profit margins. For science, algebra is used in astronomy, physics and chemistry. Astronomers and physicists use algebra to research and understand the universe. They observe, measure, interpret and develop theories to explain what is happening in the universe (US Bureau of Labor, 2009). One way that chemists use algebra is when mixing together chemicals. They need to calculate the correct amount of each substance to obtain the desired result.

Algebraic Concepts in Everyday Life

The following are examples that I learned from the course discussion board of different ways that algebra can solve everyday life problems.

- To determine each person's share of the cost for a limo ride, you would add a tip to the cost of the limo and divide by the number of riders. For example, if there were 10 kids riding in a limo and the cost of the limo was \$600 (including a 20% tip), each person would pay \$60.
- To split the cost of a restaurant bill, you would add a tip to the bill total and divide by the number of diners splitting the bill.
- To calculate a batting average in baseball use

the following formula: $\text{Batting Average} = \frac{\# \text{ of hits}}{\# \text{ of at bats}}$. • To calculate the cubic feet of a refrigerator when the height in cubic inches is known, the cubic inches must be converted to cubic feet using the formula: $l \times w \times h \text{ (in)}/1728$. Algebraic Concepts in Business and Science

The following are examples that I learned from the course discussion board of different ways that algebra can solve everyday problems in business and science. • Accountants use a formula to depreciate assets. The formula using the straight-line method is: $\frac{\text{Depreciable Cost}}{\text{Useful Life in Years}} = \text{Annual Depreciation Expense}$. The depreciable cost is the purchase price minus salvage value. Therefore, if a company purchased a vehicle for \$50,000 with an expected salvage value of \$5,000 and a useful life of 5 years, the annual depreciation expense would be \$9,000. You arrive at this total by calculating $(50,000 - 5,000)/5 = 9,000$. • Nurses use algebra to calculate drug dosages. The formula used is: $\text{Drug Prescribed} \times \text{Number of Measures/Dose per Measure}$. • Service techs at car dealerships use a formula to calculate how much to charge a customer for repair work. The formula is $X = (P + L)(H)$. X represents the total dollar amount of the repair, P is parts, L is labor and H is the hourly rate. Therefore, if parts cost \$20, labor is \$50 and it took 3 hours to repair the vehicle, the formula would be $x = (20 + 50)(3)$ and the total cost charged to the customer would be \$210.

The equation for the relationship of energy as it relates to mass is $E = MC^2$. E = Energy, M = Mass and C^2 = Speed of light squared. • Anthropologists use a linear model that relates femur length to height. Using the model, the anthropologist can determine the height of an individual when only a partial skeleton, which includes the femur, is found. The equations they use are: <https://assignbuster.com/algebra-in-the-real-world-and-everyday-life-essay-sample/>

Height in inches = $(1.880 \times \text{femur length}) + 32.010$ assuming the person was a male or Height in inches = $(1.945 \times \text{femur length}) + 28.679$ assuming the person was a female. Surprising Findings about Algebra

I was surprised to discover how often algebra is used in business, science and everyday life. When you're learning algebra in high school, you learn the equations but you're not taught how they apply to everyday life. I use algebra over and over again at work to create and analyze department budgets, but I never realized I was doing it. I also consistently use it in my everyday life, but again I never thought what I was doing was algebra. I use it when grocery shopping, planning trips and calculating how much fuel mileage to charge my company for business trips. This project has opened my eyes to how algebra is widely used in business, science and everyday life.

References:

Moore, S. (nd). How do accountants use algebra? Retrieved on May 28, 2011 from http://www.ewh.com/how-does_5031040_accountants-use-algebra.html US Bureau of Labor Statistics (2009). Occupational outlook handbook, 2010-2011 edition. Retrieved on May 28, 2011 from <http://www.bls.gov/oco/ocos052.htm>