

Exploring the World of Math

Name: _____ Date: _____

1. The store is offering discounts on all purchases. Calculate the cost of the following:
 - a. 25 lbs of beef for \$2.45 per pound and a 50% discount

 - b. 6 pairs of pants for \$9.99, \$14.99, \$18.99, \$23.99, 28.65 and \$29.99 and a 70% discount

 - c. 2 swim suits for \$65 each and a 30% discount

 - d. 35% off the purchase of a new television set for \$799

 - e. 80% off a purchase of \$250

2. This month, we had a new baby and we decide to put \$2000 in a college stock fund that earns 12% annually. After 21 years, we open the fund. Show your work. If the answer to the exponent is 10.80385, estimate the amount of money in the fund.

3. The Network Administrator measured the bandwidth at 3.75 Megabits per second. The advertised value from the ISP salesperson was 4.2 Megabits per second. What is the percent of error between the measured and theoretical amount?

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4. Our graphics business will design professional cards for \$200, letterhead for \$100 and brochures for \$600 for a new client. This is their first order and our policy is to receive 40% down payment. What is the down payment amount and the balance due?

5. We will purchase a new \$28000 car. We were in a hurry and we only reduced the price of the car to \$22500 which includes fees and taxes. We will trade in our old car for \$4500. We will finance the balance for 66 months at 2.875% interest. Fill out the formula to calculate the monthly finance charge.

6. We save \$125 monthly in a retirement savings fund for 49 years. The interest rate is $13\frac{1}{4}\%$. Setup the formula for computing your retirement savings. If the answer to the exponent is 637.09405 what is our estimated savings at the end of 49 years?

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7. Terrance, the Vet Tech is involved in purchasing two small test chambers for the local clinic. Each environmental chamber will cost \$5525 apiece. What is the simple interest on a 3.75% business loan for 72 months using the $I=PRT$ formula? I is the interest, P is the loan amount, R is the interest rate and T is the time in years. Adding the Interest to the loan amount, what is the total cost of the test chambers?

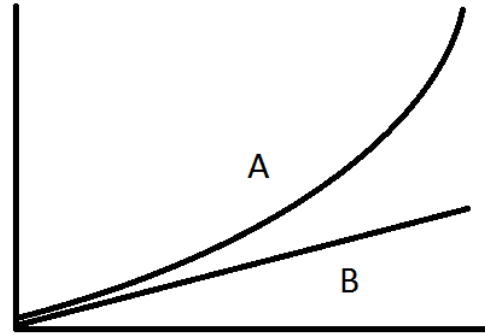
8. Our employer will match 50% for retirement investments up to 8% of our salary per year, so we elect to put that much into the account. This year we made \$34,248.65. What will our total investment be at the end of the first year?

9. Marion is planning to purchase a new car from a dealership. It is stickered at \$28000. It is built (the SFC) for 20% of the sticker price and sold to the dealership at 200% of the SFC. What is the cost to build the car? If you offer the dealer 350% of the SFC, how much will the make compared to what they paid?

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10. What line represents exponential growth such as an annuity account that has compounding interest of 11%

11. What line represents simple growth such as simple interest using $I = PRT$



12. We borrow \$7000 at an interest rate of 6% compounded quarterly for 2 years. What is the future value of the loan? What is the interest on the loan?

13. Plot the Following:

$y = 0.25x^2$

y	x
	0
	2
	4
	6
	8

$y = 1.5x + 2$

y	x
	0
	2
	4
	6
	8

