Math of Personal Finance A Final Review

NAME: _____ DATE: _____ HOUR: _____

1. Terms; Explain what each of the following terms mean or are.

- Principal: _____
- Bankruptcy: _____
- Interest: _____
- Compounding: _____
- Gross Pay: _____
- Deductions: _____
- Budget: _____
- Assets: _____
- Net Pay: _____
- Salary: _____
- Liabilities: _____
- Commissions: _____
- Wage Garnishment: _____
- W-2: _____
- 1040: _____
- W-4: _____
- 1099: _____
- Standard Deviation:_____

2. Calculate wages

- Gerry mows lawns for $9.35 an hour if he works 47 hrs what will be his gross for that week?

- Robin Hood is paid $16.50 for each arrow he makes. If makes 150 arrow in a week, how much will he earn in a week?

- Peter gets paid 19% commissions for the price of a house they sell. If a house priced at $183,253 is sold. How much does the Peter make from the sale?

- Maya earns $310 per week plus 24% on commission. She sells $2,225 in one week. What is her gross weekly earnings?

3. Variables of income

- If you are promised to make $600 each week for working 40 hours. What is you pay rate or how much do you make an hour for this job?

- Aroldis made $1,350 in weekly wages. He makes $200 in salary a week and sells $2205 in security systems. What percent does he get on commission?

4. Cost of Living

- If you were making $78,000 in Logan, and know that there is a 4.00% increase in cost of living when you move to Salt Lake City. How much would you need to make when you move to maintain your standard of living?

- If you were making $165,000 in Washington DC, and know that there is a 15.00% decrease in cost of living when you moved to Salt Lake City. How much would you need to make when you move to maintain your standard living?

5. Calculating taxes

- Social Security tax is 6.2%, if you earn $1,400 in a month for work what will you be taxed for the month for Social Security?

- Medicare Tax is 1.45%, if you earn $1,600 in a month for work what will you be taxed for the month for Medicare?

Read a tax table

6. Using the tax tables for Federal and State and the given weekly income how much would a married person with an income of $568 and two allowances need to pay for each?

Read a Pay stub

EMPLOYEE Mary Stone
EMPLOYEE NUMBER A5926
PAY PERIOD 7/1/99 TO 7/15/99
PAY DATE 7/14/99 NET PAY $ 324.11
CHECK NO. 3691215

Dance-O-Rama!

EARNINGS			TAXES WITHHELD			DEDUCTIONS	
Description	Hrs.	Amount	Tax	Current	YTD	Description	Amount
REGULAR	54	448.00	FED INCOME TAX	49.95	385.62	401k	25.10
SALARY			SOCIAL SEC	27.78	361.09		
CURRENT		448.00	MEDICARE	6.50	84.45		
YTD		5824.00	STATE INCOME TAX	14.56	182.28		

7. Where does Mary work?

8. How much is she deducted for retirement?

9. How much does she make and hour?

10. What is her gross income?

11. How much is she deducted for this pay period?

12. How often is she paid?

13. What does a W-2 tell you?

14. What does a W-4 tell you?

15. What does a 1099 form tell you?

16. When do you use a 1040 tax form?

17. You need to be able to interpret a graph or chart (Histogram)

18. Mean, Medium, Mode, Standard Deviation, and Range.

- Test scores: 50,30,90,85,76,77,76,89,84,94,93,90,90,75,67,90,88,86,65

19. Future Value use: $A = \frac{\left(p\left(\left(1+\frac{r}{n} \right)^{(n\times t)} - 1 \right) \right)}{\left(\frac{r}{n} \right)}$

- Luigi has budgeted to save $200 every month. He is going to deposit the $200 in a savings account that pays him 0.50% compounded monthly. If he leaves it in the account for 5 years what will be his ending balance?

20. Saving for a purpose

- You want to save $3,000 for college by working over the summer. You can find a job that will pay you for 40 hours per week at regular rates plus an average of 5 hours per week at overtime rates at 1.5 times. You can work for 15 weeks. You figure that you need $100 per week to pay miscellaneous variable expenses. **Calculate:** At Least How much will you need to earn per hour to save at least $3,000 in addition to meeting your weekly expenses?

21. Create a scatter plot for the following numbers on Education vs Income Level.

Education	Income
High school	26,653
Master	49,734
Less than 9^{th} grade	18,345
Bachelor	41,355
High school	28,037
Associate	35,201
Master	60,501
Associate	37,131
Less than 9^{th} grade	17,972
Bachelor	51,405

22. Find the Equation for the regression line for the Education and Income Level?

23. What is the Correlation Coefficient?

24. Interpret the correlation coefficient between Education Level and Income level? (positive or negative), (strong or weak)

25. Use the equation to predict the income level of a person that has a Bachelor's degree?

26. Use the equation to predict the income level of a person that has a high school degree?

- For the 2003-2004 school year, the Utah State University estimated that incoming students would need the following budget: tuition, $5,568; fees, $1,002; room & board, $5,218; books, $682; and transportation, $550. Assume the parents' contribution was $3,500; the student's, $1,500; and a grant, $5,000. The interest rate was about 5.5%. Assume the student plans to teach in Utah, where the median starting salary for a BA is $35,150.

  Use the mathematical model to find the Affordability Factor

  A: Principle = (Tuition + fees + room + books + transportation) – (Parents + Student's + grant) · years of school

  B: Interest = Principle · rate · time

  C: Yearly payments $y_p = \dfrac{\mathrm{Pr}inciple + Interest}{10}$

  D: Percent of Income = $\dfrac{YearlyPayments}{YearlySalry}$ or $\dfrac{y_p}{y_s}$