Unit 6: Financial Decision Making Review

1. You have a starting salary of $68,000. Find the following:
   a. Pre-tax monthly income
   b. Hourly wage
 	
A: $5,666.67
B: $32.69
	2. 9 people fit in an 8 feet by 8 feet area. Use this to estimate the size of the crowd that is 8 feet deep and 2.5 miles long on one side of the street.
	
	14,850 people

3. 1 person takes up 3.5 square feet of space. Use this information to estimate the size of the crowd that is 3 yards deep and 12 yards long on one side of the street. 93 people	4. 5 people fit in a 6 feet by 6 feet area. Use this to estimate the size of the crowd that is 5 yards deep and 3.25 miles long on one side of the street. 35,750 people
5. What is the answer to #4 if all things stay the same except the crowd is on both sides of the street? 71,500 people	6. Darius pounded 150 hits and 398 at bats. His hits consisted of 49 singles, 43 doubles, 19 triples, and 39 homeruns. What is the slugging average? .874 (don't convert to %)
7. Leroy Jones was just drafted into the MLB; his current stats are as follows: 113 hits and 410 at-bats. He has 38 singles, some doubles, 29 triples, and 27 homeruns. How many doubles does he have? 19 doubles	8. Use the solution from #7 to find the batting and slugging average for Leroy. Batting avg: .2756 Slugging avg: .6609
9. Mr. Burrell's grading scale is as follows: Tests 40%, projects 30% and final exam 30%. What grade will you earn if your averages are as follows: tests 83, projects 75, and final exam 81? 80	10. Using the same grading scale as #9, what do you need to get on the final exam to score a 93 in the class? Your testing average is 85 and your project grade is 89. 107.66 on final exam
11. You are in Ms. Cooper's class and your grades are as follows: tests (77, 81, 79, 80, and 64), classwork 83, and projects 76. What is your grade in the class if Ms. Cooper's grading scale is as follows: tests 45%, classwork 15%, and projects 40%. 77.14	12. In Comp. Writing 101 at Kennesaw State University, tests are worth 80% and the final exam is 20%. If you have a 77 going into the final, and you score an 86 on the final, what will the class grade be? 78.8
13. Using the same scale from #12, what do you need to get on the final exam if you want a 93 in the class? Your test average is 84. 129	14. You just purchased tires with the readings P245/P65R16. What is the height in inches? What is the diameter in inches?

15. Your tires (P285/60R18) seem to wearing thin and you're not too sure if the readings are accurate. What is the tire circumference?	16. Factory-installed tires, P255/75R15, look really small so you what to check the accuracy of the readings. If the odometer reading is 203,000, you have actually traveled how many miles?
17. Using the same tire size from #16, if the speedometer reading is 65, what is your actual miles per hour?	18. A finance class polled 300 people to determine how many people preferred debit or credit cards. Out of 300, 210 people preferred debit cards, 52 preferred both, and 14 didn't use either one. What's the probability that someone preferred debit cards? 128/300 = 42.6%
19. Using the scenario from #18, what's the probability of randomly selecting someone that doesn't prefer debit cards? 142/300 = 47.3%	20. What is P (credit cards | already prefer debit cards)? 52/210 = 24.7%
A poll was taken about students favorite subjects and the results are provided below: **Favorite Subject by Grade** | Grade	English	History	Math/Science	Other | |---|---|---|---|---|
7th Grade	38	36	28	14
8th Grade	47	45	72	18 | Use for problems #21 - 25	21. What's the probability of randomly selecting someone that prefers English? 85/298 = 28.5%
22. What's the probability of randomly selecting a 7th grader? 116/298 = 38.9%	23. What's the probability of randomly selecting someone that likes History given he/she is in 8th grade? 45/182 = 24.7%
24. What's the probability of randomly selecting someone that doesn't prefer English? 213/298 = 71.4%	25. What is P (7th grader | Math or Science)? 28/100 = 28%
26. You have one 6-sided dice and a bottle with 4 marbles in it (1 red, 2 green, and 1 yellow). What's the probability of rolling a 3 and pulling a red or green marble out of the bottle? 12.5%	27. At a local mini-golf facility you have to make a hole in the nose of the clown. If you miss you get $5, but if you make it you get $12 and an additional try for $7 if you make it. You can hit the ball and make it into the nose 40% of the time. What is the probability of getting: a. $5 = .60 b. $12 = .24 c. $19 = .16

28. Using the information from #27;
 	
 You decide to play for 4 weeks; how much do you expect to earn?
 	
 8.92 * 4 = $35.68
	29. Using the information from #27:
	
	 Suppose you make it into the nose of the clown 45% of the time, what's the probability of getting:
	   a. $5? = .55
	   b. $12? = .2475
	   c. $19? = .2025
	   d.

30. Mr. Clark is interested in the effects of caffeine on student performance. Students drink Red Bull before an exam and during the exam, Mr. Clark monitors their behavior and handwriting technique, taking notes throughout the day. What type of study is this? 0bservation study	31. Pepsi, Inc. wanted to know what flavor to add to an upcoming beverage line. Personnel was sent out to 1300 grocery stores around the country and interviewed every 15th customer that entered the stores. What sampling method is this? Systematic sampling
32. What type of study is in #31? Observation study	33. How much is your pre-tax monthly income if you earn 6.34% commission on your forecasted monthly sales of $355,000? $22,507

34. Morgan deposits $5,000 in a CD account at Bank of America. The account pays 3% interest compounded semi-annually. What is the future value of the account in 13 years?
 	
 $7,363.54
	35. You just accepted an Administrative Assistant position at IBM, Inc. with a starting salary of $37,500 per year. What is the monthly net income if:
	   a. Federal and State Taxes: 24.5%
	   b. SSN and Medicare Taxes: 10.4%
	   c. Retirement Contribution (monthly): 4.27%
	   d. Medical Expenses: $123
	   e. Short-Term Disability Insurance: $57
	 $1,695.59

36. Which account will earn more interest:
   a. $7,500 deposited for 8 years at 2.75% compounded daily   or
   b. $8,300 deposited for 7 years at 3.15% compounded hourly?
 	
 A; $9,345.49   B: $10,347.60
 B earned more interest
	37. If you want to have $10,000 in 4 years and you have a savings account with 4.99% interest compounded quarterly, how much do you need to put in now?
	
	 $8,200.70

Karen is buying a new Yukon Denali for $45,000 and has an option to purchase it and get a loan or lease it for 4 years. If she chooses not to buy it, she can lease the car for $675 per month with a one-time balloon payment of $3,550.	38. What is the value of the loan if she puts down 9% and gets a loan for 3.37%? $46,850.55

39. How much will she pay in interest? $1,850.53	40. What will her monthly payments be? $976.05
41. What is the total amount she will spend on the car if she decides to sell it for $30,000? $20,900.40	42. What is the total amount she will spend on the car if she leases it for the 4-year agreement? $35,950
43. You decide to test the freshness of mass produced chips in a factory. You select 3 cases from each row (there are 15 rows) and you randomly taste several chips from 10 bags in each case. What is the sampling method? Stratified sampling	44. Given the following biased question: "Are parent's academic expectations of you too high?" Rewrite as an unbiased open question. varies
45. Given the series of data, identify the 5 number summary. 11, 19, 31, 18, 11, 14, 24, 22, 21, 19, 15, 19 LE- ll, UE – 31, 1Q – 19.5, M – 19, 3Q – 21.5	46.
47. What is the total amount she will spend on the car if she decides to sell it for $30,000? omit	48. What is the total amount she will spend on the car if she leases it for the 4-year agreement? omit
49. You throw 5 darts and you must hit the target to win a prize. What's the probability of hitting 3 targets? (Pascal's triangle) 10/32 = 31.25%	50. How many different 4-key code combinations can you create if the first key must be 9, second key must be between 0 -13, and the last two can be any key (1-11)? 2,016
51. Neurologists at Yale Medical Center developed a study to determine if left handed people were more mannerable than right handed people in Central America. The research team surveyed the population of all countries north of Panama. What is the sampling method? Cluster sampling	52. Myth busters conducted an experiment to see if women over 40 had more style sense than women between the ages of 20-39 in California. The study took place in Los Angeles and 400 women from each county in the state participated. What is the sampling method? Stratified sampling