

Review Sheet for Test 2

1) The following data shows the amount of money spent on books for a semester

Class	Frequency	Midpoint
130 – 210	6	
211 – 291	7	
292 – 372	1	
373 – 453	2	
454 – 534	4	
Total		

- a) Draw a histogram for the frequency distribution
 - b) Draw a frequency polygon for the frequency distribution
- 2) Find the range, mean, variance, and standard deviation of the population data set. Round to the nearest hundredth. After that, list the elements that are within 1 and 2 standard deviations of the mean.
13, 20, 7, 8, 10, 19, 19, 9, 12, 13, 15
- 3) A bunch of flowers contains 8 roses, 6 daisies, and 5 sunflowers. If you were to choose 5 flowers at random,
- a) what is the probability that you pick 3 roses, 1 daisy, and 1 sunflower?
 - b) what is the probability that you pick 2 roses and 3 sunflowers?
- 4) When picking a task force of 5 people, you have 24 people to choose from. How many different groups of 5 people are possible?
- 5) A school sends a team of 7 students for a trivia competition. Each team sends 3 students to answer 3 separate questions. How many teams of 3 can be chosen?
- 6) A collection of data for temperature, x , in celsius, and ice cream sales, y , in dollars, for 15 days produced these results.

Temperature, x	14.2	16.4	11.9	15.2	18.5	22.1	19.4	25.1	23.4	18.1	22.6	17.2
Ice Cream Sales, y	215	325	185	332	406	522	412	614	544	421	445	408

- a) Find r , the correlation coefficient.
 - b) What kind of relationship does this represent?
 - c) Write a sentence describing this relationship for this data.
- 7) When you eat buffalo wings, the probability that each one will be delicious is .85. You eat 4 wings. Assume each buffalo wing is independent.
- a) What is the probability that all 4 are delicious?
 - b) What is the probability that the first 2 are not delicious and the last 2 are delicious?

8) Within a group of people, 78% have seen *The Dark Knight*. Of the people that have seen *The Dark Knight*, 89% have seen *The Dark Knight Rises*. If you were to choose a person out of this group at random, what is the probability that they have seen *The Dark Knight* and *The Dark Knight Rises*?

9) In a box of 50 chocolates, 30 have peanuts, and 23 have caramel. Of the chocolates with peanuts, 10 have caramel. What is the probability that a randomly chosen chocolate has caramel or peanuts?

10)

x	5	6	7	8	9
P(x)	.14		.21	.30	.11

- Find the $p(6)$
- Find the $p(\text{at least } 7)$
- Find the mean of the probability distribution
- Find the standard deviation of the probability distribution

11) A sample of 8 pitchers in Major League Baseball produced the results for wins (x), and ERA (y).

Wins, x	19	6	14	15	7	8	21	11
ERA, y	2.40	5.18	3.98	3.14	5.63	6.34	1.73	4.03

- Calculate the equation of the regression line.
- Use your equation from part a) to predict the ERA of a pitcher with 2 wins.
- Use your equation from part a) to predict the ERA of a pitcher with 13 wins.