

Unit 9 Review

Name: YY

Directions: True/False. If the statement is false, correct it to make it true.

- The set with no elements is called the universal set. Falso, Emiliar to the sample space of an experiment is the set of all possible outcomes. Typo
- 3. Two events are complements if the events cannot both occur in the same trial of an experiment. TYUCH
- 4. The probability that event B occurs given that event A has already occurred is the theoretical probability. False, conditional projo.
- 5. Two events are independent events if the occurrence of one event does not affect the occurrence of the other event. __TYVC2
- 6. A permutation is a selection of a group of objects in which order is not important. False Composition
- 7. Surveying students at a high school about their favorite high school in WS/FCS is an example of a convenience sample. True J
- 8. You have a standard deck of cards (52 cards, 4 suits, 13 cards per suit). Let event A be the probability of drawing a black card. Let event B be the probability of drawing a diamond. Let event C be the probability of drawing a 10. Let event D be the probability of drawing a red card. Calculate the following probabilities.
- = 7/13
- d. $P(B \cap A)$
- 9. Twenty three students in Math II have English I, Biology, or both. Fifteen students in Math II are enrolled in Biology. Eleven students in Math II are enrolled in English I. How many of the students are in Biology and 19 + 11 -23 = 3 strough English I?
- 10. What is the complement of passing this test? Are passing this test and its complement mutually exclusive? Explain? Not pessing the est -> yes motions excito to
- 11. The principal of your school wants to find out whether there is a connection between students who do their homework on time and students who pass their math tests. He/She collected data randomly on 60 students. The results are shown below in the table.

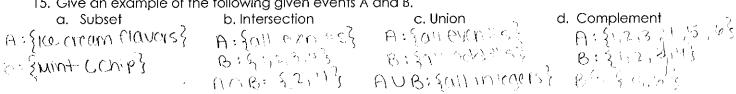
	Passed Test	Didn't Pass Test	Total
On Time HW	42	3	45
Not on time HW	6	9	15
Total	48	12	60

- a. To the nearest percent, what is the probability that a student who didn't pass the test turned in their homework on time? 3/2 = 25%
- b. To the nearest percent, what is the probability that a student had not on time homework and didn't pass the test? 9/40 = 15%
- c. To the nearest percent, what is the probability that a student passed the test? $48/\omega = 80^{\circ}/s$

2.	. There are 12 boys and 11 girls in your math II class. What is the probability of randomly selecting a g	gir
	followed by a boy (without replacement)? \(\frac{\partial cont.}{\partial cont.} \)	

$$\left(\frac{11}{23}\right)\left(\frac{12}{22}\right) = \frac{132}{500} = \frac{10}{23} = \frac{132}{500} = \frac$$

$$\left(\frac{4}{11}\right)^{\frac{3}{10}} = \frac{7}{110}$$
 or $(0.36)^{1/6}$



20. How many different ways are there to pick a President, VP and Waterboy from a group of 10?

21. How many ways are there to Choose 3 desserts from a menu of 10?

22. How many ways are there to list your 3 favorite desserts, in order, from a menu of 10?