1. Edward wants to start a savings plan through his credit union at work. He decides to put $75 per month into the account that pays 4.375% annual interest compounded monthly. How much will he have in the account at the end of 3 years?

2. Steven wants to have $7,000 to pay for a trip he plans to take in 2 years. His bank pays 4.25% annual interest compounded monthly. How much should he deposit today in order to have the money available in 2 years?

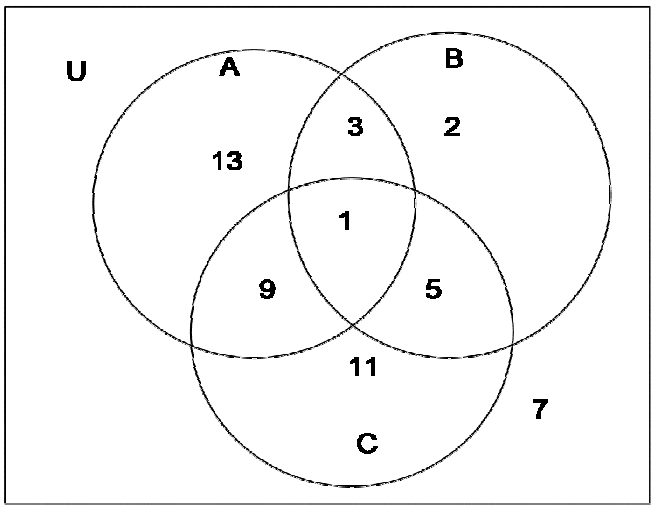
3. Mike bought a new car for $27,500. He received a $2,500 trade-in for his old car and financed the rest at 10.5% annual interest compounded monthly for 5 years. What was his monthly payment?

4. Of the students enrolled in Finite Math, 154 have had College Algebra, 49 have had Business Calculus and 38 have had both and 26 have not have either class.

a. How many students are enrolled in Finite Math?

b. How many students have taken exactly one class?

5.




Given the following Venn diagram, find the following:

a. $n\left(B^c \cup (A \cap C)\right)$

b. $n\left((A \cup B) \cap C^c\right)$

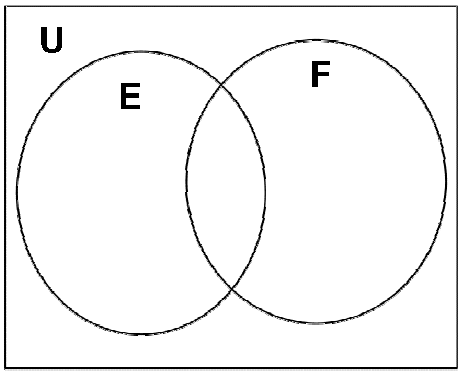
c. $n\left((A \cap C)^c \cap B\right)$

6.

a. An author is asked to pick 4 short story works he had written out 40 for publication in book form. In how many ways can these works be chosen?

b. A committee has viewed 8 proposals and they have to rank the top 4. In how many ways can this be done?

7. Let E and F be events of a sample spaces S. Let P(E) = 0.37, P(F) = 0.46 and the $P\left(E \cap F^{c}\right) =$ **0.14**




a. Find $P(E \cup F)$.

b. Find $P(E \cup F^{c})$.

8. Toss a coin 10 times. Find the probabilities:

a. What is the probability of exactly 2 heads occurs?

b. In how many ways can at most one head occurs?

c. What is the probability of at least 1 tail occurs?

9. A student studying for a vocabulary tests knows the meaning of 12 words from a list of 20 words. If a test contains 10 words from the study list, what is the probability that at least 8 of the words on the test are words the student knows?

10. A new employee was offered a choice of six basic health plans. Each health plan has three different carriers. How many different health plans does the company offer to their employee?

11. You have a jury pool of 40 individuals. 22 are women and 18 are men. The jury needs to have 12 people.

    a. In how many ways can at least one woman be chosen for the jury?

    b. What is the probability that exactly 4 women will be chosen?