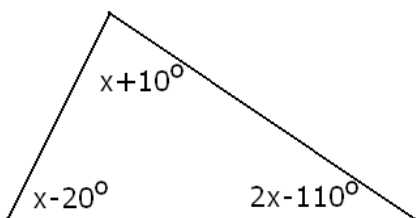


Sample Exam for Exam 2

For problems 1-7. Let $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$, $A = \{1, 4, 9\}$, $B = \{1, 2, 3, 4, 5\}$, and $C = \{1, 3, 5, 7\}$

1. Draw a Venn diagram depicting these sets.
2. Find $(B \cup C)'$.
3. Find $(A \cap C)' \cup (A' \cap C)$.
4. Find $(A \cup B') \setminus C'$.
5. List all subsets of C .
6. How many 5-element subsets does U have? (You don't have to list these sets.)
7. Is it true that $(A \cap B) \cap C' \subseteq (A \cup B) \cap C'$?
8. Find $n(B)$ if we know that $n(A) = 19$, $n(A \cup B) = 37$, and $n(A \cap B) = 8$.
9. Find the measure of an inner angle in a regular polygon of 16 sides.
10. A club has 20 members.
 - (a) In their annual election, they elect their president, vice president, and secretary. How many different outcome is possible?
 - (b) If everyone shakes hands with everyone in the room, how many handshakes took place?
11. Find x based on the picture below.



12. Find the perimeter and area of the parallelogram shown below.

