

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

1. Draw a Venn diagram depicting these sets.
2. Find $A \cup (B' \cap C)$.
3. Find $A \cap (B \cap C)'$.
4. Find $(A \cap C') \cup (B \cap C')$.
5. Find $(B \cap A)'$.
6. Find $(A')'$.
7. List all subsets of A .
8. List all three-element subsets of B .
9. How many proper subsets does B have?
10. In how many different orders can we list the elements of B ?
11. True or false?
 - (a) If $A \subseteq B$, then $n(A) \leq n(B)$.
 - (b) Every rectangle is a parallelogram.
 - (c) Every rectangle is a trapezoid.
12. Find $n(S)$ if we know that $n(T) = 11$, $n(S \cup T) = 19$, and $n(S \cap T) = 4$.
13. Find $n(A \cup B)$ if we know that $n(A) = 23$, $n(B) = 16$, and $n(A \cap B) = 9$.
14. The supplement of an angle is 8° more than three times the angle. Find the angle.
15. Find the perimeter of a triangle with sides 30 in, 40 in, and 50 in long.
16. Find the area of a right triangle with sides 30 in, 40 in, and 50 in long.
17. Find the sum of the angles in a polygon of 13 sides.
18. Find the measure of an inner angle in a regular polygon of 18 sides.
19. We throw a die twice.
 - (a) How many different outcomes are possible?
 - (b) List all outcomes where the sum of the two numbers rolled is 10.