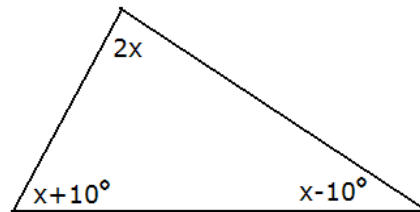


- We asked 50 students whether they watch TV and/or listen to radio. 38 students claimed that they watch TV, and 31 students claimed that they listen to radio. If 25 students watch TV and listen to radio, how many students do neither of these activities? **6**
- Let  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ ,  $A = \{1, 2, 4, 6, 9, 10\}$ ,  $B = \{2, 3, 4, 8, 10\}$ , and  $C = \{2, 7, 8, 10\}$ . Find each of the following.
  - $A' \cap (B \cup C)' = \{5\}$
  - $A' \cap (B \cup C) = \{3, 5, 8\}$
  - $(A' \cap B) \cup C' = \{1, 3, 4, 5, 6, 8, 9\}$
- Suppose that  $A$  and  $B$  are sets with  $n(A) = 17$ ,  $n(A \cup B) = 27$ , and  $n(A \cap B) = 11$ . Find the value of  $n(B)$ . **21**
- How many 5-digit numbers are there if
  - Repetition of digits is allowed?  **$9(10)^4 = 90\,000$**
  - Repetition of digits is not allowed?  **$9 \cdot 9 \cdot 8 \cdot 7 \cdot 6 = 27\,216$**
- Find the value of  $x$  based on the picture below.  **$45^\circ$**



- Find the measure of an inner angle of a regular polygon with 20 sides.  **$162^\circ$**
- The supplement of an angle is  $15^\circ$  less than twice the angle. Find the angle.  **$65^\circ$**
- A class has 18 girls and 15 boys. How many ways can we select a female president, male vice president, and male treasurer?  **$18(15)14 = 3780$**
- We toss a coin 6 times in a row.
  - How many different outcomes are possible? (1 possible outcome is a 6-chain such as TTTHTH.) **32**
  - List all possible outcomes that contain exactly one heads and five tails. **TTTTTH, TTTTHT, TTTHTT, TTHTTT, THTTTT, and HTTTTT**
- List all 3-element subsets of the set  $S = \{1, 2, 3, 4, 5, 6\}$ 

$\{1, 2, 3\}$	$\{1, 3, 4\}$	$\{1, 4, 5\}$	$\{1, 5, 6\}$	$\{2, 3, 4\}$	$\{2, 4, 5\}$	$\{2, 5, 6\}$	$\{3, 4, 5\}$	$\{3, 5, 6\}$	$\{4, 5, 6\}$
$\{1, 2, 4\}$	$\{1, 3, 5\}$	$\{1, 4, 6\}$		$\{2, 3, 5\}$	$\{2, 4, 6\}$		$\{3, 4, 6\}$		
$\{1, 2, 5\}$	$\{1, 3, 6\}$			$\{2, 3, 6\}$					
$\{1, 2, 6\}$									