

Sets "Try-It" Nov 6th

Let $A = \{2, 5, 8, z, \$\}$, $B = \{5, \uparrow, z, 8, p\}$, and $C = \{2, z, 9, p, \Delta\}$ Find the following

a) $A \cup (B \cap C)$

first, find $B \cap C = \{z, p\}$

now take the union $A \cup \{z, p\} = \{2, 5, 8, z, \$, p\}$

b) $(A \cup B) \cap C$

first, find $A \cup B = \{2, 5, 8, z, \$, \uparrow, p\}$

now intersect with C : $(A \cup B) \cap C = \{2, z, p\}$

c) $A \cap (B \cup C)$

first, find $B \cup C = \{5, \uparrow, z, 8, p, 2, 9, \Delta\}$

now intersect with A : $A \cap (B \cup C) = \{5, z, 8, 2\}$

d) $A \cap (B \cap C)$

first, use $B \cap C$ from part a $B \cap C = \{z, p\}$

now intersect with A : $A \cap \{z, p\} = \{z\}$

e) $n(A \times B) = n(A) \times n(B) = 5 \times 5 = 25$