1. (a) $A \cup B = \{1, 5, 3, 6, 7, 8\}$

   (b) $A \cap (B \cup C) = A \cap \{3, 5, 6, 7, 8\}$
   $$= \{3, 5, 6, 7\}$$

   (c) $A - B = \{1, 3\}$

   (d) $$C - A = \{8\}$$
   $$(C - A) \cup B = \{5, 6, 7, 8\}$$
   $$((C - A) \cup B) \cap A = \{3, 5, 6, 7\}$$

   (e) $\varnothing$ (as both sets are disjoint)