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## Section 1.4: Venn Diagrams

### Exercises

Draw Venn diagrams using two sets A and B, shading in the appropriate regions for the following situations.

1.  $A \cup B$
2.  $A \cap \bar{B}$
3.  $\bar{A} \cap \bar{B}$
4.  $\overline{A \cap B}$  (this would just be the negation of #2)
5.  $\overline{A \cup B}$
6.  $A \cap (\bar{A} \cup B)$
7.  $A \cup (A \cap B)$

Draw Venn diagrams using three sets: A, B, and C. Shade in the appropriate regions for the following situations.

8.  $A \cup B \cup C$
9.  $(A \cap B) \cup C$
10.  $A \cap (B \cup C)$
11.  $A \cup \bar{B} \cup C$
12.  $\bar{A} \cap B \cap \bar{C}$
13.  $(A \cap B) \cup \bar{C}$
14.  $\bar{B} \cap (\bar{A} \cup C)$