Quiz 2 Review Questions

7. If $U = (-1, 0) \cup (0, 1)$ then $\text{Int}\,\overline{U} = (-1, 1)$. ■

8. If $F = [0, 1] \cup \{2\}$, then $\overline{\text{Int}\,F} = [0, 1]$. ■

9. If $A = [-1, 0)$ and $B = (0, 1]$, then $A \cap B = \phi$, so that $\overline{A \cap B} = \phi$, but $\overline{A} \cap \overline{B} = \{0\}$. ■

10. If $A = (-1, 0]$ and $B = [0, 1)$, then $\text{Int}\,A \cup \text{Int}\,B = (-1, 0) \cup (0, 1)$, but $A \cup B = (-1, 1)$ and hence $\text{Int}(A \cup B) = (-1, 1)$. ■