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% Created 2019-03-14 Thu 23:25 % Intended LaTeX compiler: pdflatex [11pt]article [utf8]inputenc [T1]fontenc graphicx grffile longtable wrapfig rotating [normalem]ulem amsmath textcomp amssymb capt-of hyperref minted geometrya4paper,left=20mm,right=20mm,top=20mm,bottom=30mm mathtools,accents,tipa,graphicx { pdfauthor={}, pdftitle={}, pdfkeywords={}, pdfsubject={}, pdfcreator={Emacs 26.1 (Org mode 9.2)}, pdflang={English}}

Demonstrați că $\overline{A \cup B} = \overline{A} \cup \overline{B}$.

Știm: $\forall A, B \in X$

(1) $\overline{cA} = c\mathring{A}$

(2) $c\mathring{A} = c\overline{A}$

(3) $c(A \cap B) = cA \cup cB$

Fie $Y, Z \subseteq X$.

Fie $A = cY, Z = cB$.

Demonstrăm că $\overline{A \cup B} = \overline{A} \cup \overline{B}$.

$A \cup B = cY \cup cZ = c(Y \cap Z) \implies \overline{A \cup B} = \overline{c(Y \cap Z)}$