

# 5. **UNION** OF CREATIONS

## PROBLEMS



<p><b>Problem 1</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>A \cup B = B \cup A</math>.</p>	<p><b>Problem 2</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>A \cap B = B \cap A</math>.</p>
<p><b>Problem 3</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>A \cup (A \cap B) = A</math>.</p>	<p><b>Problem 4</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>A \cap (A \cup B) = A</math>.</p>



<p><b>Problem 5</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>(A \cup B) \cap (A \cap B) = A \cap B</math>.</p>
<p><b>Problem 6</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>(A \cap B) \cup (A \cap B^c) = A</math>.</p>
<p><b>Problem 7</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>(A \cup B)^c = A^c \cap B^c</math>.</p>
<p><b>Problem 8</b></p> <p>Let <math>A</math> and <math>B</math> be two sets. Show that <math>(A \cap B)^c = A^c \cup B^c</math>.</p>