知识点：笛卡儿积

测试题 7.1 设 A, B, C, D 是任意集合，判断下列各等式是否成立，如果成立，答案选"Y"，否则选"N".

(1) $(A \cap B) \times (C \cap D) = (A \times C) \cap (B \times D)$

(2) $(A \cup B) \times (C \cup D) = (A \times C) \cup (B \times D)$

(3) $(A - B) \times (C - D) = (A \times C) - (B \times D)$

(4) $A \cup (B \times C) = (A \cup B) \times (A \cup C)$

(5) $A \times (B \cap C) = (A \times B) \cap (A \times C)$