Homework 3 - September 29, 2016. Questions.

Intermediate Statistics (Carnegie Mellon University)

Homework 3
36-705
Due: Thursday Sept 29 by 3:00

1. Let $\mathcal{C} = \mathcal{A} \bigcup \mathcal{B}$. Show that
$$s_n(\mathcal{C}) \leq s_n(\mathcal{A}) + s_n(\mathcal{B})$$
where s_n denotes the shattering number.

2. Let $\mathcal{C} = \{A \cup B;\ A \in \mathcal{A},\ B \in \mathcal{B}\}$. Show that
$$s_n(\mathcal{C}) \leq s_n(\mathcal{A}) s_n(\mathcal{B}).$$

3. Chapter 5, problem 2.

4. Chapter 5, problem 5.

5. Chapter 5, problem 12.

6. Chapter 5, problem 15. Assume that $\mu_2 \neq 0$.