1. Problem 3.1.49 in the book. And give an infinite series of examples where $n/3$ is sharp.

2. Give an example of a 3-critical hypergraph with 6 edges. Prove that every 3-uniform hypergraph with at most 6 edges is 2-colorable. (Hint: Consider such hypergraph with fewest vertices, and observe that then each pair of vertices is a part of an edge.)

3. Problem 3.3.11 in the book.

4. Problem 3.2.43 in the book.

5. Problem 3.3.36 in the book.

6. Problem 3.3.40 in the book.