1. Problem 6.1 from the textbook (Min-entropy and Statistical Difference).

2. Problem 6.5 from the textbook (Extractors versus Samplers).

3. Problem 6.6 from the textbook (Extracting from Unpredictable-Bit Sources). Part (3) is optional.

4. Problem 6.9 from the textbook (The Building-Block Extractor).

Hints are on the next page.
Some hints.

3. \textit{Hint}: First prove the inequality $\frac{a+b}{c+d} \leq \max\{\frac{a}{c}, \frac{b}{d}\}$, for $a, b, c, d > 0$.