

Problem Set 2
CPSC 411 Analysis of Algorithms
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The assignment is due next Friday, Sep 16, 2011, before class.

Exercise 1. (10 points) Show that $\sum_{k=1}^n 1/k^2$ is contained in $O(1)$.

Exercise 2. (20 points) Give an asymptotic upper bound on the summation

$$\sum_{k=0}^{\lfloor \log_2 n \rfloor} \lceil n/2^k \rceil.$$

Exercise 3. (10 points) Exercise 16.4-1 on page 443 of our textbook

Exercise 4. (20 points) Exercise 16.4-4 on page 443 of our textbook

Exercise 5. (20 points) Problem 16-1 a on page 446 of our textbook

Exercise 6. (20 points) Problem 16-1 b on page 447 of our textbook