## Introduction to knot theory, Spring 2012

Homework 6, due Monday, March 5

Read section 7 of Knotes.

Exercises 7.3.7, 7.3.9, 7.3.11, 7.3.15, 7.3.16, 7.4.25.

**Extra credit:** Show that the complement of the Hopf link in the 3-sphere is homeomorphic to the direct product of the two-dimensional torus and open interval. What does this tell you about the fundamental group of the Hopf link complement? What can you say about the homotopy type of the complement of Hopf link in  $\mathbb{R}^3$ ?