Math 496, Fall 2012: Homework 3

Due Friday October November 16

Problem 1: (a) Calculate the *Kauffman bracket* of the knot 6_2. See the table on page 280 for a projection of the knot.

  (b) Use your answer from (a) to calculate the *Jones polynomial* of the knot 6_2.

Problem 2: (a) Solve exercise 6.8 on page 155 of the book.

  (b) Solve exercise 6.12 on page 162 of the book.

Problem 3: Solve exercise 6.14 on page 166 of the book.

Problem 4: Solve exercise 6.15 on page 166 of the book.

Problem 5: Solve exercise 6.16 on page 167 of the book.

Problem 6: Use Problem 4 to show that the 2-component link shown in Figure 6.28 (page 169 of the book) is not *splittable*.

Problem 7: Solve exercise 6.20 on page 171 of the book.