MATH 17: KNOT THEORY
WINTER 2018
HOMEWORK #1

Problem 1. Chapter 1, Exercise 1

Problem 2. Chapter 1, Exercise 2

Problem 3. Chapter 1, Exercise 3

Problem 4. Chapter 1, Exercise 4

Problem 5. Chapter 3, Exercise 1.2

Problem 6. Prove that equivalence of knots, as defined in class on 01/05, is an equivalence relation.

Problem 7. Show that an equivalence relation on a set S **partitions** the set into equivalence classes. In other words, show that

- The union of all equivalence classes is S.
- For any $x, y \in S$, either $[x] = [y]$, or $[x] \cap [y] = \emptyset$.

Date: Due **Friday**, January 12, at the beginning of class.