PLANAR DIAGRAM CODES FOR KNOTS

KNOT THEORY, SPRING 2017

In class today, I introduced the ideas behind the PD-code of a knot. Here, PD is short for "planar diagram." For Friday, please try to finish section 4.1 of the text, and then consider these questions:

Task 1. Find a PD code for each of these knots:

(1) a right-handed trefoil,
(2) a left-handed trefoil,
(3) the figure eight knot,
(4) The twist knot T_4,
(5) the pretzel knot $P_{-2,3,7}$.

Question 2. Can you tell from the PD code if a knot is alternating?

Question 3. How does the PD code for an oriented based knot diagram change if you take a mirror image?

Question 4. How does the PD code for an oriented based knot diagram change if you move the base point forward past one crossing?