

Table 1: XO permutations for the Legendrian knots in the atlas

Knot	X Permutation	O Permutation
3_1	{5, 1, 2, 3, 4}	{2, 3, 4, 5, 1}
$m(3_1)$	{5, 4, 3, 2, 1}	{2, 1, 5, 4, 3}
$4_1 = m(4_1)$	{6, 1, 4, 5, 3, 2}	{3, 5, 6, 2, 1, 4}
5_1	{5, 6, 7, 1, 2, 3, 4}	{7, 3, 4, 5, 6, 1, 2}
	{2, 3, 4, 5, 6, 7, 1}	{7, 1, 2, 3, 4, 5, 6}
$m(5_1)$	{2, 1, 7, 6, 5, 4, 3}	{7, 6, 5, 4, 3, 2, 1}
5_2	{2, 6, 7, 3, 4, 5, 1}	{7, 1, 5, 6, 2, 3, 4}
$m(5_2)$	{4, 1, 7, 6, 3, 2, 5}	{7, 6, 5, 2, 1, 4, 3}
	{4, 2, 7, 6, 1, 5, 3}	{7, 6, 5, 3, 4, 2, 1}
6_1	{8, 1, 6, 7, 4, 5, 3, 2}	{3, 7, 8, 5, 6, 2, 1, 4}
$m(6_1)$	{8, 1, 6, 7, 3, 2, 5, 4}	{5, 7, 8, 2, 1, 4, 3, 6}
	{8, 3, 6, 7, 5, 2, 1, 4}	{5, 7, 8, 4, 1, 6, 3, 2}
6_2	{8, 3, 5, 6, 7, 2, 1, 4}	{6, 7, 8, 1, 4, 5, 3, 2}
	{8, 1, 7, 5, 2, 3, 4, 6}	{2, 5, 3, 8, 4, 6, 7, 1}
	{8, 7, 5, 6, 1, 2, 3, 4}	{6, 1, 8, 2, 3, 4, 5, 7}
$m(6_2)$	{8, 7, 6, 5, 2, 1, 3, 4}	{3, 1, 8, 7, 6, 4, 5, 2}
$6_3 = m(6_3)$	{8, 1, 4, 6, 7, 5, 3, 2}	{4, 5, 7, 8, 3, 2, 1, 6}
	{8, 7, 6, 4, 5, 1, 2, 3}	{6, 5, 1, 8, 2, 3, 4, 7}
7_1	{2, 7, 8, 9, 1, 3, 4, 5, 6}	{9, 1, 2, 5, 6, 7, 8, 3, 4}
	{7, 8, 9, 1, 2, 3, 4, 5, 6}	{9, 5, 6, 7, 8, 1, 2, 3, 4}
	{2, 3, 4, 5, 6, 7, 8, 9, 1}	{9, 1, 2, 3, 4, 5, 6, 7, 8}
$m(7_1)$	{2, 1, 9, 8, 7, 6, 5, 4, 3}	{9, 8, 7, 6, 5, 4, 3, 2, 1}
7_2	{2, 8, 9, 6, 7, 3, 4, 5, 1}	{9, 1, 7, 8, 5, 6, 2, 3, 4}
$m(7_2)$	{6, 1, 9, 8, 3, 2, 5, 4, 7}	{9, 8, 7, 2, 1, 4, 3, 6, 5}
	{6, 3, 9, 8, 1, 2, 7, 4, 5}	{9, 8, 7, 5, 6, 4, 3, 1, 2}
	{6, 4, 9, 8, 1, 7, 3, 2, 5}	{9, 8, 7, 5, 6, 2, 1, 4, 3}
	{6, 4, 9, 8, 2, 7, 1, 5, 3}	{9, 8, 7, 5, 6, 3, 4, 2, 1}
7_3	{4, 1, 9, 8, 7, 6, 3, 2, 5}	{9, 8, 7, 6, 5, 2, 1, 4, 3}
	{4, 2, 9, 8, 7, 6, 1, 5, 3}	{9, 8, 7, 6, 5, 3, 4, 2, 1}
$m(7_3)$	{5, 8, 9, 6, 7, 1, 2, 3, 4}	{9, 3, 7, 8, 4, 5, 6, 1, 2}
	{2, 8, 9, 3, 4, 5, 6, 7, 1}	{9, 1, 7, 8, 2, 3, 4, 5, 6}
7_4	{6, 1, 9, 3, 2, 8, 5, 4, 7}	{9, 8, 2, 1, 7, 4, 3, 6, 5}
	{6, 3, 9, 1, 8, 5, 4, 2, 7}	{9, 8, 4, 7, 2, 3, 1, 6, 5}
	{7, 4, 9, 1, 8, 6, 3, 2, 5}	{9, 8, 6, 7, 5, 2, 1, 4, 3}
	{7, 4, 9, 2, 8, 6, 1, 5, 3}	{9, 8, 6, 7, 5, 3, 4, 2, 1}
$m(7_4)$	{2, 8, 9, 3, 6, 7, 4, 5, 1}	{9, 1, 7, 8, 2, 5, 6, 3, 4}
7_5	{3, 8, 9, 1, 4, 5, 6, 7, 2}	{9, 1, 2, 7, 8, 3, 4, 5, 6}
	{2, 8, 9, 3, 5, 4, 6, 7, 1}	{9, 1, 5, 7, 8, 2, 3, 4, 6}
	{5, 8, 9, 4, 6, 7, 1, 2, 3}	{9, 2, 7, 8, 3, 4, 5, 6, 1}
	{2, 7, 8, 9, 3, 4, 5, 6, 1}	{9, 1, 6, 7, 8, 2, 3, 4, 5}
$m(7_5)$	{4, 1, 9, 8, 7, 3, 2, 6, 5}	{9, 8, 7, 6, 2, 1, 5, 4, 3}
	{5, 2, 9, 8, 7, 1, 6, 4, 3}	{9, 8, 7, 6, 4, 5, 3, 2, 1}
7_6	{2, 8, 9, 4, 3, 5, 6, 7, 1}	{9, 1, 3, 2, 7, 8, 4, 5, 6}
	{6, 8, 9, 1, 2, 4, 3, 7, 5}	{9, 3, 7, 5, 8, 1, 6, 4, 2}
	{6, 8, 9, 5, 1, 7, 2, 3, 4}	{9, 3, 7, 8, 6, 4, 5, 1, 2}
$m(7_6)$	{3, 1, 9, 8, 6, 7, 5, 4, 2}	{9, 8, 7, 2, 1, 4, 3, 6, 5}
	{4, 8, 9, 3, 2, 7, 6, 1, 5}	{9, 1, 7, 8, 6, 5, 3, 4, 2}
	{4, 1, 9, 8, 6, 7, 3, 2, 5}	{9, 8, 7, 2, 1, 5, 6, 4, 3}

Knot	X Permutation	O Permutation
7 ₇	{2, 5, 8, 9, 7, 4, 3, 6, 1}	{9, 1, 3, 6, 2, 8, 5, 4, 7}
	{2, 6, 8, 9, 5, 4, 3, 7, 1}	{9, 1, 3, 7, 8, 2, 6, 5, 4}
	{3, 1, 9, 5, 4, 7, 6, 8, 2}	{9, 8, 2, 1, 6, 5, 3, 4, 7}
m(7 ₇)	{4, 8, 9, 2, 1, 7, 5, 6, 3}	{9, 1, 7, 8, 6, 3, 2, 4, 5}
	{4, 8, 9, 3, 6, 7, 2, 1, 5}	{9, 2, 7, 8, 1, 5, 6, 4, 3}
8 ₁₉	{3, 2, 1, 7, 6, 5, 4}	{7, 6, 5, 4, 3, 2, 1}
m(8 ₁₉)	{3, 4, 5, 6, 7, 1, 2}	{7, 1, 2, 3, 4, 5, 6}
8 ₂₀	{8, 2, 1, 4, 5, 7, 6, 3}	{4, 7, 5, 6, 8, 3, 2, 1}
m(8 ₂₀)	{8, 6, 4, 5, 3, 7, 1, 2}	{3, 1, 7, 8, 6, 2, 4, 5}
8 ₂₁	{8, 1, 4, 6, 5, 7, 2, 3}	{5, 7, 8, 2, 1, 3, 4, 6}
	{8, 2, 4, 6, 7, 5, 1, 3}	{5, 7, 8, 1, 3, 2, 4, 6}
	{8, 1, 7, 2, 4, 3, 5, 6}	{2, 4, 3, 5, 8, 6, 7, 1}
m(8 ₂₁)	{8, 7, 4, 6, 5, 3, 1, 2}	{3, 1, 8, 2, 7, 6, 4, 5}
9 ₄₂	{8, 7, 3, 2, 1, 4, 6, 5}	{4, 1, 8, 6, 5, 7, 3, 2}
m(9 ₄₂)	{8, 1, 5, 6, 7, 4, 2, 3}	{4, 7, 8, 2, 3, 1, 5, 6}
9 ₄₃	{4, 8, 9, 3, 2, 7, 1, 6, 5}	{9, 1, 7, 8, 6, 5, 4, 3, 2}
m(9 ₄₃)	{7, 1, 6, 9, 2, 3, 4, 5, 8}	{9, 8, 4, 5, 6, 7, 1, 2, 3}
9 ₄₄	{3, 8, 1, 9, 6, 4, 5, 7, 2}	{9, 5, 7, 2, 1, 8, 3, 4, 6}
	{4, 8, 2, 9, 3, 6, 7, 5, 1}	{9, 1, 7, 5, 8, 2, 4, 3, 6}
	{5, 8, 9, 1, 2, 4, 3, 7, 6}	{9, 3, 7, 6, 8, 1, 5, 4, 2}
m(9 ₄₄)	{5, 8, 9, 3, 1, 7, 2, 6, 4}	{9, 2, 7, 8, 6, 4, 5, 3, 1}
9 ₄₅	{2, 8, 9, 3, 5, 4, 6, 7, 1}	{9, 1, 4, 7, 2, 8, 3, 5, 6}
	{2, 8, 9, 3, 6, 4, 5, 7, 1}	{9, 1, 5, 7, 2, 8, 3, 4, 6}
	{5, 8, 9, 4, 6, 1, 7, 2, 3}	{9, 2, 7, 8, 3, 5, 4, 6, 1}
m(9 ₄₅)	{4, 2, 9, 3, 8, 1, 7, 5, 6}	{9, 8, 5, 7, 4, 6, 2, 1, 3}
	{4, 1, 9, 7, 8, 6, 3, 2, 5}	{9, 8, 6, 2, 5, 1, 7, 4, 3}
9 ₄₆	{8, 3, 1, 5, 7, 4, 6, 2}	{4, 7, 6, 8, 2, 1, 3, 5}
m(9 ₄₆)	{8, 1, 7, 5, 6, 3, 4, 2}	{3, 6, 4, 8, 2, 7, 1, 5}
9 ₄₇	{4, 2, 1, 9, 7, 5, 6, 8, 3}	{9, 8, 6, 3, 2, 1, 4, 5, 7}
m(9 ₄₇)	{6, 1, 9, 2, 8, 3, 4, 5, 7}	{9, 8, 4, 7, 5, 6, 1, 2, 3}
9 ₄₈	{5, 1, 9, 2, 7, 6, 8, 4, 3}	{9, 8, 4, 6, 5, 1, 3, 2, 7}
	{6, 3, 9, 1, 8, 2, 5, 7, 4}	{9, 8, 5, 7, 4, 6, 1, 3, 2}
	{6, 1, 9, 2, 5, 8, 4, 3, 7}	{9, 8, 4, 7, 1, 3, 2, 6, 5}
	{6, 2, 9, 1, 8, 4, 3, 5, 7}	{9, 8, 5, 7, 3, 2, 6, 1, 4}
m(9 ₄₈)	{2, 5, 8, 9, 4, 6, 7, 3, 1}	{9, 1, 3, 7, 8, 2, 5, 6, 4}
9 ₄₉	{6, 2, 9, 1, 8, 5, 4, 3, 7}	{9, 8, 4, 7, 3, 2, 1, 6, 5}
	{6, 3, 9, 2, 8, 1, 7, 5, 4}	{9, 8, 5, 7, 4, 6, 3, 2, 1}
m(9 ₄₉)	{2, 4, 8, 9, 5, 6, 7, 1, 3}	{9, 1, 3, 7, 8, 2, 4, 5, 6}
10 ₁₂₄	{8, 7, 6, 5, 4, 3, 2, 1}	{3, 2, 1, 8, 7, 6, 5, 4}
m(10 ₁₂₄)	{8, 1, 2, 3, 4, 5, 6, 7}	{3, 4, 5, 6, 7, 8, 1, 2}
10 ₁₂₈	{5, 1, 9, 4, 3, 2, 8, 7, 6}	{9, 8, 2, 1, 7, 6, 5, 4, 3}
	{7, 3, 9, 2, 1, 8, 6, 5, 4}	{9, 8, 6, 7, 5, 4, 3, 2, 1}
m(10 ₁₂₈)	{2, 8, 9, 3, 4, 5, 6, 7, 1}	{9, 1, 6, 7, 8, 2, 3, 4, 5}
10 ₁₃₂	{3, 8, 2, 9, 4, 7, 5, 6, 1}	{9, 1, 7, 6, 8, 3, 2, 4, 5}
m(10 ₁₃₂)	{6, 2, 9, 8, 4, 5, 3, 7, 1}	{9, 8, 7, 3, 1, 2, 6, 4, 5}
	{6, 3, 9, 8, 1, 2, 7, 4, 5}	{9, 8, 7, 4, 5, 6, 3, 1, 2}

Knot	X Permutation	O Permutation
10_{136}	$\{5, 1, 9, 7, 3, 2, 8, 4, 6\}$ $\{4, 1, 9, 2, 5, 8, 3, 7, 6\}$ $\{5, 1, 9, 2, 6, 8, 7, 4, 3\}$ $\{6, 2, 9, 1, 8, 3, 5, 4, 7\}$	$\{9, 8, 4, 2, 1, 6, 5, 7, 3\}$ $\{9, 8, 3, 7, 1, 4, 6, 5, 2\}$ $\{9, 8, 4, 7, 1, 5, 3, 2, 6\}$ $\{9, 8, 5, 7, 4, 6, 2, 1, 3\}$
$m(10_{136})$	$\{2, 6, 8, 9, 4, 5, 3, 7, 1\}$	$\{9, 1, 3, 7, 8, 2, 6, 4, 5\}$
10_{139}	$\{4, 3, 9, 2, 8, 1, 7, 6, 5\}$	$\{9, 8, 7, 6, 5, 4, 2, 3, 1\}$
$m(10_{139})$	$\{5, 4, 6, 8, 9, 7, 1, 3, 2\}$ $\{2, 4, 5, 6, 7, 10, 8, 9, 1, 3\}$	$\{9, 1, 2, 3, 4, 5, 6, 7, 8\}$ $\{10, 1, 3, 2, 4, 5, 6, 7, 8, 9\}$
10_{140}	$\{4, 8, 2, 9, 3, 5, 7, 6, 1\}$	$\{9, 1, 7, 6, 8, 2, 4, 3, 5\}$
$m(10_{140})$	$\{7, 2, 9, 5, 6, 4, 8, 3, 1\}$ $\{7, 3, 9, 1, 2, 8, 6, 4, 5\}$	$\{9, 8, 3, 1, 2, 7, 5, 6, 4\}$ $\{9, 8, 4, 6, 7, 5, 3, 1, 2\}$
10_{142}	$\{6, 1, 9, 5, 4, 3, 2, 8, 7\}$ $\{6, 3, 9, 2, 1, 8, 7, 5, 4\}$	$\{9, 8, 3, 2, 1, 7, 6, 5, 4\}$ $\{9, 8, 5, 7, 6, 4, 3, 2, 1\}$
$m(10_{142})$	$\{3, 4, 8, 9, 5, 6, 7, 1, 2\}$	$\{9, 1, 2, 7, 8, 3, 4, 5, 6\}$
10_{145}	$\{5, 8, 7, 1, 9, 4, 2, 3, 6\}$	$\{9, 4, 3, 5, 6, 7, 8, 1, 2\}$
$m(10_{145})$	$\{5, 2, 9, 3, 8, 1, 6, 7, 4\}$ $\{7, 2, 1, 10, 6, 5, 4, 3, 9, 8\}$ $\{2, 1, 11, 10, 9, 8, 7, 3, 4, 5, 6\}$	$\{9, 8, 7, 6, 4, 5, 2, 3, 1\}$ $\{10, 8, 9, 3, 1, 2, 7, 5, 4, 6\}$ $\{11, 7, 3, 4, 6, 5, 2, 9, 8, 1, 10\}$
10_{160}	$\{5, 1, 9, 2, 4, 3, 8, 7, 6\}$ $\{5, 2, 9, 3, 1, 8, 7, 4, 6\}$	$\{9, 8, 3, 7, 1, 6, 5, 4, 2\}$ $\{9, 8, 4, 7, 6, 5, 2, 1, 3\}$
$m(10_{160})$	$\{3, 7, 8, 9, 2, 4, 5, 1, 6\}$	$\{9, 1, 5, 6, 7, 8, 3, 4, 2\}$
10_{161}^*	$\{4, 3, 5, 7, 9, 6, 8, 2, 1\}$ $\{3, 2, 4, 6, 5, 7, 10, 8, 9, 1\}$	$\{9, 8, 1, 2, 3, 4, 5, 6, 7\}$ $\{10, 9, 1, 3, 2, 4, 5, 6, 7, 8\}$
$m(10_{161})$	$\{5, 3, 9, 2, 8, 1, 7, 6, 4\}$ $\{7, 2, 1, 10, 6, 5, 4, 3, 9, 8\}$ $\{5, 2, 1, 11, 10, 9, 8, 7, 4, 3, 6\}$	$\{9, 8, 7, 6, 4, 5, 2, 3, 1\}$ $\{10, 9, 8, 3, 2, 1, 7, 5, 4, 6\}$ $\{11, 7, 4, 2, 3, 6, 5, 1, 9, 8, 10\}$
$11n_{19}$	$\{4, 7, 8, 9, 2, 3, 1, 5, 6\}$	$\{9, 1, 5, 6, 7, 8, 4, 2, 3\}$
$m(11n_{19})$	$\{4, 3, 7, 9, 8, 2, 1, 6, 5\}$	$\{9, 8, 1, 6, 5, 7, 4, 3, 2\}$
$11n_{38}$	$\{4, 1, 9, 2, 6, 8, 7, 3, 5\}$	$\{9, 8, 3, 7, 1, 5, 4, 6, 2\}$
$m(11n_{38})$	$\{2, 7, 3, 9, 5, 6, 4, 8, 1\}$	$\{9, 1, 8, 4, 2, 3, 7, 5, 6\}$
$11n_{95}$	$\{3, 1, 9, 7, 8, 6, 5, 4, 2\}$	$\{9, 8, 5, 2, 4, 3, 1, 7, 6\}$
$m(11n_{95})$	$\{4, 6, 7, 9, 2, 8, 1, 3, 5\}$ $\{3, 5, 8, 9, 6, 7, 1, 4, 2\}$	$\{9, 1, 3, 5, 6, 4, 7, 8, 2\}$ $\{9, 1, 2, 4, 3, 5, 6, 8, 7\}$
$11n_{118}$	$\{5, 3, 9, 1, 8, 2, 7, 4, 6\}$	$\{9, 8, 7, 6, 4, 5, 3, 1, 2\}$
$m(11n_{118})$	$\{4, 2, 5, 9, 7, 6, 8, 1, 3\}$	$\{9, 8, 1, 3, 2, 4, 5, 6, 7\}$
$12n_{242}$	$\{4, 3, 2, 9, 8, 1, 7, 6, 5\}$	$\{9, 8, 7, 6, 5, 4, 3, 2, 1\}$
$m(12n_{242})$	$\{6, 7, 8, 9, 1, 2, 3, 4, 5\}$ $\{3, 4, 5, 6, 7, 10, 8, 9, 1, 2\}$	$\{9, 3, 4, 5, 6, 7, 8, 1, 2\}$ $\{10, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$
$12n_{591}$	$\{5, 3, 2, 9, 8, 1, 7, 6, 4\}$ $\{6, 2, 1, 10, 9, 5, 4, 3, 8, 7\}$ $\{8, 7, 3, 11, 10, 2, 1, 9, 6, 5, 4\}$	$\{9, 8, 7, 6, 4, 5, 3, 2, 1\}$ $\{10, 9, 8, 7, 3, 2, 1, 6, 5, 4\}$ $\{11, 10, 9, 6, 5, 8, 7, 4, 3, 2, 1\}$
$m(12n_{591})$	$\{5, 7, 8, 9, 1, 2, 3, 4, 6\}$	$\{9, 3, 4, 6, 5, 7, 8, 1, 2\}$
$15n_{41185}$	$\{4, 3, 2, 1, 9, 8, 7, 6, 5\}$	$\{9, 8, 7, 6, 5, 4, 3, 2, 1\}$
$m(15n_{41185})$	$\{4, 5, 6, 7, 8, 9, 1, 2, 3\}$	$\{9, 1, 2, 3, 4, 5, 6, 7, 8\}$