

Pensieve header: K11n95 for Effie.

<< **KnotTheory`**

Loading KnotTheory` version of September 6, 2014, 13:37:37.2841.
 Read more at <http://katlas.org/wiki/KnotTheory>.

? ColouredJones

ColouredJones[K, n][q] returns the coloured Jones polynomial of a knot in colour n (i.e., in the (n+1)-dimensional representation) in the indeterminate q. Some of these polynomials have been precomputed in KnotTheory`. To force computation, use ColouredJones[K, n, Program -> "prog"][q], with "prog" replaced by one of the two available programs, "REngine" or "Braid" (including the quotes). "REngine" (default) computes the invariant for closed knots (as well as links where all components are coloured by the same integer) directly from the MorseLink presentation of the knot, while "Braid" computes the invariant via a presentation of the knot as a braid closure. "REngine" will usually be faster, but it might be better to use "Braid" when (roughly): 1) a "good" braid representative is available for the knot, and 2) the length of this braid is less than the maximum width of the MorseLink presentation of the knot.

K = Knot["K11n95"]

Knot[11, NonAlternating, 95]

ColouredJones[K, 1][q]

KnotTheory::loading : Loading precomputed data in DTCode4KnotsTo11`.

KnotTheory::credits :

The GaussCode to PD conversion was written by Siddarth Sankaran at the University of Toronto in the summer of 2005.

KnotTheory::credits : MorseLink was added to KnotTheory` by Siddarth Sankaran at the University of Toronto in the summer of 2005.

KnotTheory::credits : The R-matrix engine was written by Siddarth Sankaran at the University of Toronto, in the summer of 2005.

General::stop : Further output of KnotTheory::credits will be suppressed during this calculation. >>

KnotTheory::loading : Loading precomputed data in PD4Knots`.

$$2 q^2 - 3 q^3 + 5 q^4 - 6 q^5 + 6 q^6 - 5 q^7 + 4 q^8 - 2 q^9$$

ColouredJones[K, 2][q]

$$q^3 + 2 q^4 - 6 q^5 + q^6 + 13 q^7 - 14 q^8 - 8 q^9 + 29 q^{10} - 16 q^{11} - 21 q^{12} + 40 q^{13} - 13 q^{14} - 31 q^{15} + 40 q^{16} - 7 q^{17} - 30 q^{18} + 29 q^{19} + q^{20} - 20 q^{21} + 12 q^{22} + 4 q^{23} - 7 q^{24} + q^{25} + q^{26}$$

ColouredJones [K, 3] [q]

$$2 q^4 - q^6 - 9 q^7 + 5 q^8 + 14 q^9 + 7 q^{10} - 28 q^{11} - 19 q^{12} + 30 q^{13} + 47 q^{14} - 30 q^{15} - 69 q^{16} + 11 q^{17} + 99 q^{18} + 6 q^{19} - 114 q^{20} - 35 q^{21} + 128 q^{22} + 60 q^{23} - 135 q^{24} - 82 q^{25} + 136 q^{26} + 99 q^{27} - 131 q^{28} - 113 q^{29} + 122 q^{30} + 119 q^{31} - 104 q^{32} - 123 q^{33} + 83 q^{34} + 115 q^{35} - 53 q^{36} - 103 q^{37} + 26 q^{38} + 82 q^{39} - 3 q^{40} - 57 q^{41} - 9 q^{42} + 32 q^{43} + 12 q^{44} - 12 q^{45} - 12 q^{46} + 6 q^{47} + 2 q^{48} + 2 q^{49} - 2 q^{50}$$

ColouredJones [K, 4] [q]

$$q^4 + 2 q^5 - 6 q^7 - 4 q^8 - 5 q^9 + 14 q^{10} + 25 q^{11} - 3 q^{12} - 16 q^{13} - 58 q^{14} - 9 q^{15} + 68 q^{16} + 60 q^{17} + 50 q^{18} - 127 q^{19} - 133 q^{20} + 10 q^{21} + 124 q^{22} + 255 q^{23} - 68 q^{24} - 261 q^{25} - 203 q^{26} + 36 q^{27} + 479 q^{28} + 154 q^{29} - 243 q^{30} - 444 q^{31} - 208 q^{32} + 580 q^{33} + 406 q^{34} - 92 q^{35} - 590 q^{36} - 469 q^{37} + 568 q^{38} + 577 q^{39} + 76 q^{40} - 641 q^{41} - 649 q^{42} + 506 q^{43} + 664 q^{44} + 210 q^{45} - 633 q^{46} - 748 q^{47} + 408 q^{48} + 682 q^{49} + 322 q^{50} - 545 q^{51} - 774 q^{52} + 234 q^{53} + 597 q^{54} + 422 q^{55} - 341 q^{56} - 689 q^{57} + 11 q^{58} + 379 q^{59} + 431 q^{60} - 76 q^{61} - 455 q^{62} - 133 q^{63} + 110 q^{64} + 289 q^{65} + 85 q^{66} - 175 q^{67} - 112 q^{68} - 40 q^{69} + 98 q^{70} + 78 q^{71} - 19 q^{72} - 30 q^{73} - 37 q^{74} + 7 q^{75} + 19 q^{76} + 5 q^{77} + 2 q^{78} - 6 q^{79} - 3 q^{80} + q^{81} + q^{82}$$

ColouredJones [K, 5] [q]

$$2 q^4 + 2 q^6 - 3 q^7 - 9 q^8 - 9 q^9 + 7 q^{10} + 9 q^{11} + 28 q^{12} + 28 q^{13} - 18 q^{14} - 56 q^{15} - 57 q^{16} - 39 q^{17} + 45 q^{18} + 147 q^{19} + 127 q^{20} + 4 q^{21} - 142 q^{22} - 271 q^{23} - 199 q^{24} + 92 q^{25} + 375 q^{26} + 428 q^{27} + 170 q^{28} - 355 q^{29} - 717 q^{30} - 531 q^{31} + 128 q^{32} + 856 q^{33} + 1030 q^{34} + 305 q^{35} - 830 q^{36} - 1442 q^{37} - 928 q^{38} + 519 q^{39} + 1779 q^{40} + 1593 q^{41} - 31 q^{42} - 1846 q^{43} - 2242 q^{44} - 633 q^{45} + 1761 q^{46} + 2759 q^{47} + 1295 q^{48} - 1483 q^{49} - 3116 q^{50} - 1949 q^{51} + 1153 q^{52} + 3335 q^{53} + 2476 q^{54} - 795 q^{55} - 3441 q^{56} - 2893 q^{57} + 468 q^{58} + 3483 q^{59} + 3204 q^{60} - 196 q^{61} - 3486 q^{62} - 3430 q^{63} - 31 q^{64} + 3449 q^{65} + 3605 q^{66} + 253 q^{67} - 3385 q^{68} - 3744 q^{69} - 475 q^{70} + 3245 q^{71} + 3829 q^{72} + 767 q^{73} - 3007 q^{74} - 3871 q^{75} - 1081 q^{76} + 2625 q^{77} + 3784 q^{78} + 1448 q^{79} - 2099 q^{80} - 3555 q^{81} - 1762 q^{82} + 1441 q^{83} + 3125 q^{84} + 1979 q^{85} - 737 q^{86} - 2528 q^{87} - 1990 q^{88} + 82 q^{89} + 1801 q^{90} + 1813 q^{91} + 388 q^{92} - 1078 q^{93} - 1434 q^{94} - 630 q^{95} + 463 q^{96} + 973 q^{97} + 652 q^{98} - 61 q^{99} - 545 q^{100} - 499 q^{101} - 126 q^{102} + 201 q^{103} + 317 q^{104} + 171 q^{105} - 55 q^{106} - 135 q^{107} - 105 q^{108} - 36 q^{109} + 42 q^{110} + 67 q^{111} + 17 q^{112} - 4 q^{113} - 10 q^{114} - 20 q^{115} - 4 q^{116} + 6 q^{117} + 4 q^{118} + 2 q^{120} - 2 q^{121}$$

ColouredJones [K, 6] [q]**ColouredJones [K, 7] [q]**