

Pensieve header:  $\rho_1$  of ribbon knots with up to 10 crossings.

This is Rho1.nb of <http://drorbn.net/j22/ap>.

```
In[ ]:= Once[<< KnotTheory`];
```

Loading KnotTheory` version of February 2, 2020, 10:53:45.2097.  
Read more at <http://katlas.org/wiki/KnotTheory>.

```
In[ ]:= tab14 = Get["C:\\drorbn\\AcademicPensieve\\Projects\\APAI\\Data\\Rho3-14.m"];
tab14 /. (K_ -> v_) -> (rho[K] = v);
```

```
In[ ]:= Rot::usage =
  "Rot[K] where K is any n-crossing knot presentation returns {Cs, phi}, where
  Cs is a length n list of crossings as triples {s,i,j}
  and phi is a length 2n list of rotation numbers.";
```

```
In[ ]:= PD[epd_EPD] := PD@@epd /. {X[i_,j_] -> X[j, i + 1, j + 1, i], Xbar[i_,j_] -> X[j, i, j + 1, i + 1]}
```

```
In[ ]:= Rot[pd_PD] := Module[{n, xs, x, rots, Xp, Xm, front = {1}, k},
  n = Length@pd; rots = Table[0, {2 n}];
  xs = Cases[pd, x_X -> {Xp[x[[4]], x[[1]] PositiveQ@x,
    Xm[x[[2]], x[[1]] True}];
  For[k = 1, k <= 2 n, ++k,
    If[FreeQ[front, -k],
      front = Flatten@Replace[front, k -> (xs /. {
        Xp[k, l_] | Xm[l_, k] -> {l + 1, k + 1, -l},
        Xp[l_, k] | Xm[k, l_] -> (++rots[[l]]; {-l, k + 1, l + 1}),
        _Xp | _Xm -> {}
      }), {1}],
      Cases[front, k | -k] /. {k, -k} -> --rots[[k]];
    ]
  ];
  {xs /. {Xp[i_, j_] -> {+1, i, j}, Xm[i_, j_] -> {-1, i, j}}, rots}];
Rot[K_] := Rot[PD[K]];
```

```

In[ ]:= R1[s_, i_, j_] := s (g_{j,i} (g_{j+1,j} + g_{j,j+1} - g_{i,j}) - g_{i,i} (g_{j,j+1} - 1) - 1 / 2);
rho[K_] := rho[K] = Module[{Cs, phi, n, A, s, i, j, k, Delta, G, rho1},
  {Cs, phi} = Rot[K]; n = Length[Cs];
  A = IdentityMatrix[2 n + 1];
  Cases[Cs, {s_, i_, j_} -> (A[[{i, j}, {i + 1, j + 1}]] += ( -T^s T^s - 1 ))];
  Delta = T^(-Total[phi] - Total[Cs[[All, 1]]) / 2 Det[A];
  G = Inverse[A];
  rho1 = Sum_{k=1}^n R1 @@ Cs[[k]] - Sum_{k=1}^{2^n} phi[[k]] (g_{kk} - 1 / 2);
  Factor@{Delta, Delta^2 rho1 /. g_{alpha, beta} -> G[[alpha, beta]]};

```

Ribbons from C:\drorbn\AcademicPensieve\Projects\PG\MakeTable.nb

```

In[ ]:= Ribbons = {Knot[0, 1], Knot[6, 1], Knot[8, 8], Knot[8, 9], Knot[8, 20], Knot[9, 27],
  Knot[9, 41], Knot[9, 46], Knot[10, 3], Knot[10, 22], Knot[10, 35], Knot[10, 42],
  Knot[10, 48], Knot[10, 75], Knot[10, 87], Knot[10, 99], Knot[10, 123],
  Knot[10, 129], Knot[10, 137], Knot[10, 140], Knot[10, 153], Knot[10, 155]}

```

```

Out[ ]:= {Knot[0, 1], Knot[6, 1], Knot[8, 8], Knot[8, 9], Knot[8, 20], Knot[9, 27],
  Knot[9, 41], Knot[9, 46], Knot[10, 3], Knot[10, 22], Knot[10, 35], Knot[10, 42],
  Knot[10, 48], Knot[10, 75], Knot[10, 87], Knot[10, 99], Knot[10, 123],
  Knot[10, 129], Knot[10, 137], Knot[10, 140], Knot[10, 153], Knot[10, 155]}

```

```

In[ ]:= rho[Knot[8, 20]]

```

```

Out[ ]:= { (1 - T + T^2)^2 / T^2, 4 (-1 + T)^2 (1 - T + T^2) / T^2 }

```

In[ ]:= **Column**[ $\rho$  / @ **Ribbons**]

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

Out[ ]:=

$$\{ \mathbf{1}, \mathbf{0} \}$$

$$\left\{ -\frac{(-2+T)(-1+2T)}{T}, \frac{(-1+T)^2(1-4T+T^2)}{T^2} \right\}$$

$$\left\{ \frac{(2-2T+T^2)(1-2T+2T^2)}{T^2}, -\frac{(-1+T)^2(1-4T+12T^2-16T^3+12T^4-4T^5+T^6)}{T^4} \right\}$$

$$\left\{ -\frac{(-1+T-2T^2+T^3)(-1+2T-T^2+T^3)}{T^3}, \mathbf{0} \right\}$$

$$\left\{ \frac{(1-T+T^2)^2}{T^2}, \frac{4(-1+T)^2(1-T+T^2)}{T^2} \right\}$$

$$\left\{ -\frac{(-1+2T-3T^2+T^3)(-1+3T-2T^2+T^3)}{T^3}, \frac{(-1+T)^2(1-8T+24T^2-32T^3+24T^4-8T^5+T^6)}{T^4} \right\}$$

$$\left\{ \frac{(3-3T+T^2)(1-3T+3T^2)}{T^2}, \frac{(-1+T)^2(3-20T+70T^2-108T^3+70T^4-20T^5+3T^6)}{T^4} \right\}$$

$$\left\{ -\frac{(-2+T)(-1+2T)}{T}, \frac{3(-1+T)^2(1-4T+T^2)}{T^2} \right\}$$

$$\left\{ -\frac{(-3+2T)(-2+3T)}{T}, \frac{(-1+T)^2(11-28T+11T^2)}{T^2} \right\}$$

$$\left\{ -\frac{(-2+2T-2T^2+T^3)(-1+2T-2T^2+T^3)}{T^3}, -\frac{(-1+T)^2(1-4T+10T^2-24T^3+37T^4-44T^5+37T^6-24T^7+10T^8-4T^9+T^{10})}{T^6} \right\}$$

$$\left\{ \frac{(2-4T+T^2)(1-4T+2T^2)}{T^2}, -\frac{(-1+T)^2(-1+5T-7T^2+T^3)(-1+7T-5T^2+T^3)}{T^4} \right\}$$

$$\left\{ -\frac{(-1+3T-4T^2+T^3)(-1+4T-3T^2+T^3)}{T^3}, \frac{(-1+T)^2(2-8T+11T^2-12T^3+11T^4-8T^5+2T^6)}{T^4} \right\}$$

$$\left\{ \frac{(1-T+2T^2-2T^3+T^4)(1-2T+2T^2-T^3+T^4)}{T^4}, \frac{(-1+T)^4(1+T)^2(1+T^2)(1-T+T^2)^2}{T^6} \right\}$$

$$\left\{ -\frac{(-1+3T-4T^2+T^3)(-1+4T-3T^2+T^3)}{T^3}, -\frac{(-2+T)^2(-1+T)^2(-1+2T)^2(1-4T+T^2)}{T^4} \right\}$$

$$\left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, -\frac{(-1+T)^2(1-T+T^2)(1-5T+17T^2-44T^3+64T^4-44T^5+17T^6-5T^7+T^8)}{T^6} \right\}$$

$$\left\{ \frac{(1-T+T^2)^4}{T^4}, \mathbf{0} \right\}$$

$$\left\{ \frac{(1-3T+3T^2-3T^3+T^4)^2}{T^4}, \mathbf{0} \right\}$$

$$\left\{ \frac{(2-2T+T^2)(1-2T+2T^2)}{T^2}, -\frac{(-1+T)^2(1+2T-14T^2+20T^3-14T^4+2T^5+T^6)}{T^4} \right\}$$

$$\left\{ \frac{(1-3T+T^2)^2}{T^2}, -\frac{4(-1+T)^2(1-3T+T^2)^2}{T^3} \right\}$$

$$\left\{ \frac{(1-T+T^2)^2}{T^2}, \frac{8(-1+T)^2(1-T+T^2)}{T^2} \right\}$$

$$\left\{ \frac{(1-T+T^3)(1-T^2+T^3)}{T^3}, \frac{(-1+T)^2(1-2T+T^2+2T^3-T^4-T^6+2T^7+T^8-2T^9+T^{10})}{T^6} \right\}$$

$$\left\{ -\frac{(-1+T-2T^2+T^3)(-1+2T-T^2+T^3)}{T^3}, -\frac{2(-1+T)^2(1-6T+11T^2-14T^3+11T^4-6T^5+T^6)}{T^4} \right\}$$

In[ ]:= **Table**[**Echo**[@{**K**, **MemberQ**[**Ribbons**, **K**],  $\rho$ @**K**}, {**K**, **AllKnots**[{**8**, **8**}]}];

$$\gg \left\{ \text{Knot}[8, 1], \text{False}, \left\{ -\frac{3-7T+3T^2}{T}, \frac{(-1+T)^2(5-16T+5T^2)}{T^2} \right\} \right\}$$

$$\gg \left\{ \text{Knot}[8, 2], \text{False}, \left\{ -\frac{1-3T+3T^2-3T^3+3T^4-3T^5+T^6}{T^3}, \frac{(-1+T)^2(2-8T+10T^2-12T^3+13T^4-12T^5+13T^6-12T^7+10T^8-8T^9+2T^{10})}{T^6} \right\} \right\}$$

- $\gg \left\{ \text{Knot}[8, 3], \text{False}, \left\{ -\frac{4 - 9T + 4T^2}{T}, \emptyset \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 4], \text{False}, \left\{ -\frac{2 - 5T + 5T^2 - 5T^3 + 2T^4}{T^2}, \frac{(-1 + T)^2 (3 - 8T + 6T^2 - 4T^3 + 6T^4 - 8T^5 + 3T^6)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 5], \text{False}, \left\{ -\frac{(1 - T + T^2)(1 - 2T + T^2 - 2T^3 + T^4)}{T^3}, \right. \right.$   
 $\left. -\frac{(-1 + T)^2 (1 + T^2)(2 - 8T + 11T^2 - 12T^3 + 11T^4 - 12T^5 + 11T^6 - 8T^7 + 2T^8)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 6], \text{False}, \left\{ -\frac{2 - 6T + 7T^2 - 6T^3 + 2T^4}{T^2}, \frac{(-1 + T)^2 (5 - 20T + 28T^2 - 32T^3 + 28T^4 - 20T^5 + 5T^6)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 7], \text{False}, \left\{ \frac{1 - 3T + 5T^2 - 5T^3 + 5T^4 - 3T^5 + T^6}{T^3}, \right. \right.$   
 $\left. -\frac{(-1 + T)^2 (1 - 4T + 10T^2 - 12T^3 + 13T^4 - 12T^5 + 13T^6 - 12T^7 + 10T^8 - 4T^9 + T^{10})}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 8], \text{True}, \left\{ \frac{(2 - 2T + T^2)(1 - 2T + 2T^2)}{T^2}, -\frac{(-1 + T)^2 (1 - 4T + 12T^2 - 16T^3 + 12T^4 - 4T^5 + T^6)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 9], \text{True}, \left\{ -\frac{(-1 + T - 2T^2 + T^3)(-1 + 2T - T^2 + T^3)}{T^3}, \emptyset \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 10], \text{False}, \left\{ \frac{(1 - T + T^2)^3}{T^3}, -\frac{(-1 + T)^2 (1 - T + T^2)^2 (1 + T + T^2)(1 - 3T + 6T^2 - 3T^3 + T^4)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 11], \text{False}, \right.$   
 $\left. \left\{ -\frac{(-2 + T)(-1 + 2T)(1 - T + T^2)}{T^2}, \frac{(-1 + T)^2 (5 - 24T + 39T^2 - 44T^3 + 39T^4 - 24T^5 + 5T^6)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 12], \text{False}, \left\{ \frac{1 - 7T + 13T^2 - 7T^3 + T^4}{T^2}, \emptyset \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 13], \text{False}, \left\{ \frac{2 - 7T + 11T^2 - 7T^3 + 2T^4}{T^2}, -\frac{(-1 + T)^2 (1 - 4T + 14T^2 - 20T^3 + 14T^4 - 4T^5 + T^6)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 14], \text{False}, \left\{ -\frac{2 - 8T + 11T^2 - 8T^3 + 2T^4}{T^2}, \frac{(-1 + T)^4 (5 - 18T + 16T^2 - 18T^3 + 5T^4)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 15], \text{False}, \left\{ \frac{(1 - T + T^2)(3 - 5T + 3T^2)}{T^2}, \frac{(-1 + T)^2 (3 - 4T + 3T^2)(7 - 12T + 17T^2 - 12T^3 + 7T^4)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 16], \text{False}, \left\{ \frac{1 - 4T + 8T^2 - 9T^3 + 8T^4 - 4T^5 + T^6}{T^3}, \right. \right.$   
 $\left. \frac{(-1 + T)^2 (1 - T + T^2)(1 - 5T + 11T^2 - 12T^3 + 12T^4 - 12T^5 + 11T^6 - 5T^7 + T^8)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 17], \text{False}, \left\{ -\frac{1 - 4T + 8T^2 - 11T^3 + 8T^4 - 4T^5 + T^6}{T^3}, \emptyset \right\} \right\}$
- $\gg \left\{ \text{Knot}[8, 18], \text{False}, \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}, \emptyset \right\} \right\}$

- »  $\left\{ \text{Knot}[8, 19], \text{False}, \left\{ \frac{(1 - T + T^2)(1 - T^2 + T^4)}{T^3}, -\frac{(-1 + T)^2(1 + T^4)(3 + 4T^3 + 3T^6)}{T^6} \right\} \right\}$
- »  $\left\{ \text{Knot}[8, 20], \text{True}, \left\{ \frac{(1 - T + T^2)^2}{T^2}, \frac{4(-1 + T)^2(1 - T + T^2)}{T^2} \right\} \right\}$
- »  $\left\{ \text{Knot}[8, 21], \text{False}, \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)}{T^2}, \frac{(-1 + T)^2(1 - 8T + 16T^2 - 20T^3 + 16T^4 - 8T^5 + T^6)}{T^4} \right\} \right\}$

In[ ]:=

**Table[****If[Head[Expand@PolynomialGCD[ $\rho$ [K][[1]],  $\partial_T \rho$ [K][[1]]] === Plus,****Echo@{K, MemberQ[Ribbons, K],  $\rho$ @K},****Nothing****], {K, AllKnots[]}]**

- »  $\left\{ \text{Knot}[8, 10], \text{False}, \left\{ \frac{(1 - T + T^2)^3}{T^3}, -\frac{(-1 + T)^2(1 - T + T^2)^2(1 + T + T^2)(1 - 3T + 6T^2 - 3T^3 + T^4)}{T^6} \right\} \right\}$
- »  $\left\{ \text{Knot}[8, 18], \text{False}, \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}, \emptyset \right\} \right\}$
- »  $\left\{ \text{Knot}[8, 20], \text{True}, \left\{ \frac{(1 - T + T^2)^2}{T^2}, \frac{4(-1 + T)^2(1 - T + T^2)}{T^2} \right\} \right\}$
- »  $\left\{ \text{Knot}[9, 24], \text{False}, \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}, -\frac{4(-1 + T)^2(1 - 3T + T^2)(1 - T + T^2)}{T^3} \right\} \right\}$
- »  $\left\{ \text{Knot}[9, 40], \text{False}, \left\{ \frac{(1 - 3T + T^2)^2(1 - T + T^2)}{T^3}, \frac{(-1 + T)^2(1 + T^2)(1 - 3T + T^2)^2(1 - 6T + 9T^2 - 6T^3 + T^4)}{T^6} \right\} \right\}$
- »  $\left\{ \text{Knot}[10, 59], \text{False}, \left\{ \frac{(1 - 3T + T^2)^2(1 - T + T^2)}{T^3}, -\frac{(-1 + T)^2(1 - 3T + T^2)^2(1 - 6T + 8T^2 - 8T^3 + 8T^4 - 6T^5 + T^6)}{T^6} \right\} \right\}$
- »  $\left\{ \text{Knot}[10, 62], \text{False}, \left\{ \frac{(1 - T + T^2)^2(1 - T + T^2 - T^3 + T^4)}{T^4}, -\frac{(-1 + T)^2(1 + T^2)(1 - T + T^2)(2 - 6T + 13T^2 - 13T^3 + 16T^4 - 15T^5 + 16T^6 - 13T^7 + 13T^8 - 6T^9 + 2T^{10})}{T^8} \right\} \right\}$
- »  $\left\{ \text{Knot}[10, 65], \text{False}, \left\{ \frac{(1 - T + T^2)^2(2 - 3T + 2T^2)}{T^3}, -\frac{(-1 + T)^2(1 - T + T^2)(1 - 3T + 6T^2 - 3T^3 + T^4)(5 - 4T + 5T^2 - 4T^3 + 5T^4)}{T^6} \right\} \right\}$
- »  $\left\{ \text{Knot}[10, 77], \text{False}, \left\{ \frac{(1 - T + T^2)^2(2 - 3T + 2T^2)}{T^3}, -\frac{(-1 + T)^2(1 - T + T^2)(5 - 19T + 47T^2 - 66T^3 + 76T^4 - 66T^5 + 47T^6 - 19T^7 + 5T^8)}{T^6} \right\} \right\}$

- $$\gg \left\{ \text{Knot}[10, 82], \text{False}, \left\{ -\frac{(1-T+T^2)^2 (1-2T+T^2-2T^3+T^4)}{T^4}, \right. \right.$$

$$\left. \left. \frac{(-1+T)^4 (1+T^2) (1-T+T^2) (1-3T+5T^2-6T^3-2T^4-6T^5+5T^6-3T^7+T^8)}{T^8} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 87], \text{True}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right. \right.$$

$$\left. \left. -\frac{(-1+T)^2 (1-T+T^2) (1-5T+17T^2-44T^3+64T^4-44T^5+17T^6-5T^7+T^8)}{T^6} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 98], \text{False}, \right.$$

$$\left. \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \frac{3(-1+T)^2 (1-T+T^2)^2 (3-14T+22T^2-24T^3+22T^4-14T^5+3T^6)}{T^6} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 99], \text{True}, \left\{ \frac{(1-T+T^2)^4}{T^4}, \emptyset \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 123], \text{True}, \left\{ \frac{(1-3T+3T^2-3T^3+T^4)^2}{T^4}, \emptyset \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 137], \text{True}, \left\{ \frac{(1-3T+T^2)^2}{T^2}, -\frac{4(-1+T)^2 (1-3T+T^2)^2}{T^3} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 140], \text{True}, \left\{ \frac{(1-T+T^2)^2}{T^2}, \frac{8(-1+T)^2 (1-T+T^2)}{T^2} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[10, 143], \text{False}, \left\{ \frac{(1-T+T^2)^3}{T^3}, \frac{(-1+T)^2 (1+T^2) (1-T+T^2)^2 (1-2T+7T^2-2T^3+T^4)}{T^6} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[11, \text{Alternating}, 5], \text{False}, \left\{ -\frac{(1-3T+T^2)^3}{T^3}, \frac{4(-1+T)^2 (1-3T+T^2)^3}{T^4} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[11, \text{Alternating}, 28], \text{False}, \right.$$

$$\left. \left\{ \frac{(1-3T+3T^2-3T^3+T^4)^2}{T^4}, -\frac{2(-1+T)^2 (1-6T+8T^2-6T^3+T^4) (1-3T+3T^2-3T^3+T^4)}{T^5} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[11, \text{Alternating}, 43], \text{False}, \right.$$

$$\left. \left\{ \frac{(1-T+T^2)^2 (4-7T+4T^2)}{T^3}, -\frac{2(-1+T)^2 (1-T+T^2)^2 (27-86T+156T^2-182T^3+156T^4-86T^5+27T^6)}{T^6} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[11, \text{Alternating}, 44], \text{False}, \right.$$

$$\left. \left\{ \frac{(1-T+T^2)^2 (1-3T+5T^2-3T^3+T^4)}{T^4}, \frac{4(-1+T)^2 (1-T+T^2)^2 (1-3T+5T^2-3T^3+T^4)}{T^5} \right\} \right\}$$
- $$\gg \left\{ \text{Knot}[11, \text{Alternating}, 47], \text{False}, \right.$$

$$\left. \left\{ \frac{(1-T+T^2)^2 (1-3T+5T^2-3T^3+T^4)}{T^4}, \frac{4(-1+T)^2 (1-T+T^2)^2 (1-3T+5T^2-3T^3+T^4)}{T^5} \right\} \right\}$$

- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 57], \text{False}, \left\{ -\frac{(1-T+T^2)^2 (1-3T+3T^2-3T^3+T^4)}{T^4}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-T+T^2)^2 (1-6T+15T^2-22T^3+21T^4-24T^5+21T^6-22T^7+15T^8-6T^9+T^{10})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 58], \text{False}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-T+T^2) (1-7T+19T^2-26T^3+20T^4-26T^5+19T^6-7T^7+T^8)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 72], \text{False}, \left\{ \frac{(1-T+T^2)^2 (1-4T+7T^2-4T^3+T^4)}{T^4}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-T+T^2) (1-5T+10T^2-5T^3+T^4) (1-4T+7T^2-4T^3+T^4)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 103], \text{False}, \right.$   
 $\left. \left\{ \frac{(-2+T)^2 (-1+2T)^2}{T^2}, -\frac{4(-2+T)(-1+T)^4 (-1+2T)(1-4T+T^2)}{T^4} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 108], \text{False}, \left\{ -\frac{(1-T+T^2)^2 (1-3T+3T^2-3T^3+T^4)}{T^4}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-T+T^2) (1-7T+22T^2-43T^3+54T^4-55T^5+54T^6-55T^7+54T^8-43T^9+22T^{10}-7T^{11}+T^{12})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 109], \text{False}, \right.$   
 $\left. \left\{ \frac{(1-T+T^2)^2 (1-3T+5T^2-3T^3+T^4)}{T^4}, \frac{4(-1+T)^4 (1-T+T^2) (1-3T+5T^2-3T^3+T^4)}{T^5} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 139], \text{False}, \left\{ -\frac{(1-T+T^2)^2 (1-3T+3T^2-3T^3+T^4)}{T^4}, -\frac{1}{T^8} (-1+T)^2 (1-T+T^2) \right. \right.$   
 $\left. \left. \frac{(1-7T+22T^2-51T^3+86T^4-111T^5+126T^6-111T^7+86T^8-51T^9+22T^{10}-7T^{11}+T^{12})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 157], \text{False}, \left\{ -\frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-3T+T^2) (1-T+T^2)^2 (1-5T+11T^2-18T^3+12T^4-18T^5+11T^6-5T^7+T^8)}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 165], \text{False}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right. \right.$   
 $\left. \frac{(-1+T)^2 (1-T+T^2) (1-7T+19T^2-50T^3+80T^4-50T^5+19T^6-7T^7+T^8)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 201], \text{False}, \right.$   
 $\left. \left\{ \frac{(-2+T)^2 (-1+2T)^2}{T^2}, -\frac{4(-2+T)(-1+T)^2 (-1+2T)(1-4T+T^2)}{T^3} \right\} \right\}$

- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 231], \text{False}, \left\{ -\frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, \right. \right.$   
 $\left. \frac{(-1+T)^2(1-T+T^2)^2(1-6T+15T^2-22T^3+21T^4-24T^5+21T^6-22T^7+15T^8-6T^9+T^{10})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 263], \text{False}, \left\{ \frac{(1-T+T^2)^2(2-2T+T^2-2T^3+2T^4)}{T^4}, \right. \right.$   
 $\left. -\frac{(-1+T)^2(1-T+T^2)^2(17-30T+53T^2-66T^3+89T^4-84T^5+89T^6-66T^7+53T^8-30T^9+17T^{10})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 264], \text{False}, \left\{ -\frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \right. \right.$   
 $\left. -\frac{(-1+T)^2(1-T+T^2)^2(1-8T+27T^2-58T^3+81T^4-80T^5+81T^6-58T^7+27T^8-8T^9+T^{10})}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 297], \text{False}, \right.$   
 $\left\{ \frac{(1-3T+T^2)^2(2-3T+2T^2)}{T^3}, \frac{(-1+T)^2(1-3T+T^2)^2(5-30T+62T^2-72T^3+62T^4-30T^5+5T^6)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 305], \text{False}, \right.$   
 $\left\{ -\frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \frac{(-1+T)^2(1-3T+T^2)^2(1-T+T^2)^2(1-2T+2T^2+2T^4-2T^5+T^6)}{T^8} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 326], \text{False}, \right.$   
 $\left\{ \frac{(1-3T+5T^2-3T^3+T^4)^2}{T^4}, -\frac{2(-1+T)^4(1-3T+5T^2-3T^3+T^4)(2-2T+5T^2-2T^3+2T^4)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{Alternating}, 332], \text{False}, \right.$   
 $\left\{ \frac{(1-T+T^2)^2(1-5T+9T^2-5T^3+T^4)}{T^4}, -\frac{(-1+T)^2(1-T+T^2)^2(1-10T+30T^2-44T^3+30T^4-10T^5+T^6)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{NonAlternating}, 66], \text{False}, \left\{ \frac{(1-3T+T^2)^2(1-T+T^2)}{T^3}, \right. \right.$   
 $\left. -\frac{(-1+T)^2(1-12T+59T^2-156T^3+251T^4-292T^5+251T^6-156T^7+59T^8-12T^9+T^{10})}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{NonAlternating}, 71], \text{False}, \right.$   
 $\left\{ \frac{(1-T+T^2)^2(2-3T+2T^2)}{T^3}, -\frac{(-1+T)^2(1-T+T^2)^2(5-14T+36T^2-44T^3+36T^4-14T^5+5T^6)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{NonAlternating}, 72], \text{False}, \right.$   
 $\left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, -\frac{(-1+T)^2(1-T+T^2)^2(9-46T+84T^2-100T^3+84T^4-46T^5+9T^6)}{T^6} \right\} \right\}$
- $\gg \left\{ \text{Knot}[11, \text{NonAlternating}, 73], \text{False}, \left\{ \frac{(1-T+T^2)^2}{T^2}, \frac{4(-1+T)^2(1-T+T^2)^2}{T^3} \right\} \right\}$



- » {Knot[11, NonAlternating, 74], False, { $\frac{(1 - T + T^2)^2}{T^2}$ ,  $\frac{4(-1 + T)^2(1 - T + T^2)^2}{T^3}$ }}
- » {Knot[11, NonAlternating, 75], False, { $\frac{(1 - T + T^2)^2(2 - 3T + 2T^2)}{T^3}$ ,  $\frac{(-1 + T)^2(1 - T + T^2)^2(5 - 14T + 36T^2 - 44T^3 + 36T^4 - 14T^5 + 5T^6)}{T^6}$ }}
- » {Knot[11, NonAlternating, 76], False, { $\frac{(1 - T + T^2)^2(1 - T + T^2 - T^3 + T^4)}{T^4}$ ,  $\frac{(-1 + T)^2(1 - T + T^2)^2(2 - 4T + 9T^2 - 6T^3 + 10T^4 - 8T^5 + 10T^6 - 6T^7 + 9T^8 - 4T^9 + 2T^{10})}{T^8}$ }}
- » {Knot[11, NonAlternating, 77], False, { $\frac{(1 - T + T^2)^2(1 + T - 3T^2 + T^3 + T^4)}{T^4}$ ,  $-\frac{2(-1 + T)^2(1 - T + T^2)^2(2 + 4T - 5T^2 + 16T^4 - 18T^5 + 16T^6 - 5T^8 + 4T^9 + 2T^{10})}{T^8}$ }}
- » {Knot[11, NonAlternating, 78], False, { $\frac{(1 - T + T^2)^2(1 - T + T^2 - T^3 + T^4)}{T^4}$ ,  $-\frac{(-1 + T)^2(1 - T + T^2)^2(2 - 4T + 9T^2 - 6T^3 + 10T^4 - 8T^5 + 10T^6 - 6T^7 + 9T^8 - 4T^9 + 2T^{10})}{T^8}$ }}
- » {Knot[11, NonAlternating, 81], False, { $-\frac{(1 - T + T^2)^2(1 - T - T^2 - T^3 + T^4)}{T^4}$ ,  $-\frac{(-1 + T)^2(1 - T + T^2)^2(1 + T + T^2)(3 - 9T + 6T^2 - T^3 - 2T^4 - T^5 + 6T^6 - 9T^7 + 3T^8)}{T^8}$ }}
- » {Knot[11, NonAlternating, 85], False, { $-\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}$ ,  $-\frac{4(-1 + T)^4(1 - 3T + T^2)(1 - T + T^2)}{T^4}$ }}
- » {Knot[11, NonAlternating, 106], False, { $\frac{(1 - T + T^2)^3}{T^3}$ ,  $\frac{(-1 + T)^2(1 - T + T^2)^2(1 - 2T + 4T^3 - 2T^5 + T^6)}{T^6}$ }}
- » {Knot[11, NonAlternating, 164], False, { $-\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}$ ,  $-\frac{2(-1 + T)^4(1 - T + T^2)^2(1 - 4T - 4T^3 + T^4)}{T^6}$ }}

Out[ ]=

- { {Knot[8, 10], False, { $\frac{(1 - T + T^2)^3}{T^3}$ ,  $-\frac{(-1 + T)^2(1 - T + T^2)^2(1 + T + T^2)(1 - 3T + 6T^2 - 3T^3 + T^4)}{T^6}$ }},
- {Knot[8, 18], False, { $-\frac{(1 - 3T + T^2)(1 - T + T^2)^2}{T^3}$ ,  $\emptyset$ }},
- {Knot[8, 20], True, { $\frac{(1 - T + T^2)^2}{T^2}$ ,  $\frac{4(-1 + T)^2(1 - T + T^2)}{T^2}$ }},

$$\left\{ \text{Knot}[9, 24], \text{False}, \left\{ -\frac{(1-3T+T^2)(1-T+T^2)^2}{T^3}, -\frac{4(-1+T)^2(1-3T+T^2)(1-T+T^2)}{T^3} \right\} \right\},$$

$$\left\{ \text{Knot}[9, 40], \text{False}, \left\{ \frac{(1-3T+T^2)^2(1-T+T^2)}{T^3}, \frac{(-1+T)^2(1+T^2)(1-3T+T^2)^2(1-6T+9T^2-6T^3+T^4)}{T^6} \right\} \right\}, \left\{ \text{Knot}[10, 59], \text{False}, \left\{ \frac{(1-3T+T^2)^2(1-T+T^2)}{T^3}, -\frac{(-1+T)^2(1-3T+T^2)^2(1-6T+8T^2-8T^3+8T^4-6T^5+T^6)}{T^6} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 62], \text{False}, \left\{ \frac{(1-T+T^2)^2(1-T+T^2-T^3+T^4)}{T^4}, -\frac{1}{T^8}(-1+T)^2(1+T^2)(1-T+T^2)(2-6T+13T^2-13T^3+16T^4-15T^5+16T^6-13T^7+13T^8-6T^9+2T^{10}) \right\} \right\},$$

$$\left\{ \text{Knot}[10, 65], \text{False}, \left\{ \frac{(1-T+T^2)^2(2-3T+2T^2)}{T^3}, -\frac{(-1+T)^2(1-T+T^2)(1-3T+6T^2-3T^3+T^4)(5-4T+5T^2-4T^3+5T^4)}{T^6} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 77], \text{False}, \left\{ \frac{(1-T+T^2)^2(2-3T+2T^2)}{T^3}, -\frac{(-1+T)^2(1-T+T^2)(5-19T+47T^2-66T^3+76T^4-66T^5+47T^6-19T^7+5T^8)}{T^6} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 82], \text{False}, \left\{ -\frac{(1-T+T^2)^2(1-2T+T^2-2T^3+T^4)}{T^4}, \frac{(-1+T)^4(1+T^2)(1-T+T^2)(1-3T+5T^2-6T^3-2T^4-6T^5+5T^6-3T^7+T^8)}{T^8} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 87], \text{True}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, -\frac{(-1+T)^2(1-T+T^2)(1-5T+17T^2-44T^3+64T^4-44T^5+17T^6-5T^7+T^8)}{T^6} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 98], \text{False}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \frac{3(-1+T)^2(1-T+T^2)^2(3-14T+22T^2-24T^3+22T^4-14T^5+3T^6)}{T^6} \right\} \right\},$$

$$\left\{ \text{Knot}[10, 99], \text{True}, \left\{ \frac{(1-T+T^2)^4}{T^4}, \emptyset \right\} \right\},$$

$$\left\{ \text{Knot}[10, 123], \text{True}, \left\{ \frac{(1-3T+3T^2-3T^3+T^4)^2}{T^4}, \emptyset \right\} \right\},$$

$$\begin{aligned}
& \left\{ \text{Knot}[10, 137], \text{True}, \left\{ \frac{(1-3T+T^2)^2}{T^2}, -\frac{4(-1+T)^2(1-3T+T^2)^2}{T^3} \right\} \right\}, \\
& \left\{ \text{Knot}[10, 140], \text{True}, \left\{ \frac{(1-T+T^2)^2}{T^2}, \frac{8(-1+T)^2(1-T+T^2)}{T^2} \right\} \right\}, \\
& \left\{ \text{Knot}[10, 143], \text{False}, \left\{ \frac{(1-T+T^2)^3}{T^3}, \frac{(-1+T)^2(1+T^2)(1-T+T^2)^2(1-2T+7T^2-2T^3+T^4)}{T^6} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 5], \text{False}, \left\{ -\frac{(1-3T+T^2)^3}{T^3}, \frac{4(-1+T)^2(1-3T+T^2)^3}{T^4} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 28], \text{False}, \right. \\
& \quad \left. \left\{ \frac{(1-3T+3T^2-3T^3+T^4)^2}{T^4}, -\frac{2(-1+T)^2(1-6T+8T^2-6T^3+T^4)(1-3T+3T^2-3T^3+T^4)}{T^5} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 43], \text{False}, \left\{ \frac{(1-T+T^2)^2(4-7T+4T^2)}{T^3}, \right. \right. \\
& \quad \left. \left. -\frac{2(-1+T)^2(1-T+T^2)^2(27-86T+156T^2-182T^3+156T^4-86T^5+27T^6)}{T^6} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 44], \text{False}, \left\{ \frac{(1-T+T^2)^2(1-3T+5T^2-3T^3+T^4)}{T^4}, \right. \right. \\
& \quad \left. \left. \frac{4(-1+T)^2(1-T+T^2)^2(1-3T+5T^2-3T^3+T^4)}{T^5} \right\} \right\}, \left\{ \text{Knot}[11, \text{Alternating}, 47], \text{False}, \right. \\
& \quad \left. \left\{ \frac{(1-T+T^2)^2(1-3T+5T^2-3T^3+T^4)}{T^4}, \frac{4(-1+T)^2(1-T+T^2)^2(1-3T+5T^2-3T^3+T^4)}{T^5} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 57], \text{False}, \left\{ -\frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, \right. \right. \\
& \quad \left. \left. \frac{(-1+T)^2(1-T+T^2)^2(1-6T+15T^2-22T^3+21T^4-24T^5+21T^6-22T^7+15T^8-6T^9+T^{10})}{T^8} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 58], \text{False}, \left\{ -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right. \right. \\
& \quad \left. \left. \frac{(-1+T)^2(1-T+T^2)(1-7T+19T^2-26T^3+20T^4-26T^5+19T^6-7T^7+T^8)}{T^6} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 72], \text{False}, \left\{ \frac{(1-T+T^2)^2(1-4T+7T^2-4T^3+T^4)}{T^4}, \right. \right. \\
& \quad \left. \left. -\frac{(-1+T)^2(1-T+T^2)(1-5T+10T^2-5T^3+T^4)(1-4T+7T^2-4T^3+T^4)}{T^6} \right\} \right\}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 103], \text{False}, \left\{ \frac{(-2+T)^2(-1+2T)^2}{T^2}, \right. \right.
\end{aligned}$$

$$\begin{aligned}
& - \frac{4(-2+T)(-1+T)^4(-1+2T)(1-4T+T^2)}{T^4} \}}}, \{ \text{Knot}[11, \text{Alternating}, 108], \\
& \text{False}, \left\{ - \frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, \frac{1}{T^8}(-1+T)^2(1-T+T^2) \right. \\
& \quad \left. (1-7T+22T^2-43T^3+54T^4-55T^5+54T^6-55T^7+54T^8-43T^9+22T^{10}-7T^{11}+T^{12}) \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 109], \text{False}, \left\{ \frac{(1-T+T^2)^2(1-3T+5T^2-3T^3+T^4)}{T^4}, \right. \\
& \quad \left. \frac{4(-1+T)^4(1-T+T^2)(1-3T+5T^2-3T^3+T^4)}{T^5} \right\}}, \{ \text{Knot}[11, \text{Alternating}, 139], \\
& \text{False}, \left\{ - \frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, - \frac{1}{T^8}(-1+T)^2(1-T+T^2) \right. \\
& \quad \left. (1-7T+22T^2-51T^3+86T^4-111T^5+126T^6-111T^7+86T^8-51T^9+22T^{10}-7T^{11}+T^{12}) \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 157], \text{False}, \left\{ - \frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \right. \\
& \quad \left. \frac{(-1+T)^2(1-3T+T^2)(1-T+T^2)^2(1-5T+11T^2-18T^3+12T^4-18T^5+11T^6-5T^7+T^8)}{T^8} \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 165], \text{False}, \left\{ - \frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right. \\
& \quad \left. - \frac{(-1+T)^2(1-T+T^2)(1-7T+19T^2-50T^3+80T^4-50T^5+19T^6-7T^7+T^8)}{T^6} \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 201], \text{False}, \left\{ \frac{(-2+T)^2(-1+2T)^2}{T^2}, \right. \\
& \quad \left. - \frac{4(-2+T)(-1+T)^2(-1+2T)(1-4T+T^2)}{T^3} \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 231], \text{False}, \left\{ - \frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, \right. \\
& \quad \left. \frac{(-1+T)^2(1-T+T^2)^2(1-6T+15T^2-22T^3+21T^4-24T^5+21T^6-22T^7+15T^8-6T^9+T^{10})}{T^8} \right\}}, \\
& \{ \text{Knot}[11, \text{Alternating}, 263], \text{False}, \left\{ \frac{(1-T+T^2)^2(2-2T+T^2-2T^3+2T^4)}{T^4}, \right. \\
& \quad \left. - \frac{(-1+T)^2(1-T+T^2)^2(17-30T+53T^2-66T^3+89T^4-84T^5+89T^6-66T^7+53T^8-30T^9+17T^{10})}{T^8} \right. \\
& \quad \left. \right\}}, \{ \text{Knot}[11, \text{Alternating}, 264], \text{False}, \left\{ - \frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \right.
\end{aligned}$$

$$\begin{aligned}
& - \frac{(-1 + T)^2 (1 - T + T^2)^2 (1 - 8T + 27T^2 - 58T^3 + 81T^4 - 80T^5 + 81T^6 - 58T^7 + 27T^8 - 8T^9 + T^{10})}{T^8} \}}}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 297], \text{False}, \left\{ \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right. \right. \\
& \quad \left. \left. \frac{(-1 + T)^2 (1 - 3T + T^2)^2 (5 - 30T + 62T^2 - 72T^3 + 62T^4 - 30T^5 + 5T^6)}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 305], \text{False}, \left\{ - \frac{(1 - 3T + T^2) (1 - T + T^2)^3}{T^4}, \right. \right. \\
& \quad \left. \left. \frac{(-1 + T)^2 (1 - 3T + T^2)^2 (1 - T + T^2)^2 (1 - 2T + 2T^2 + 2T^4 - 2T^5 + T^6)}{T^8} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 326], \text{False}, \left\{ \frac{(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^4}, \right. \right. \\
& \quad \left. \left. - \frac{2(-1 + T)^4 (1 - 3T + 5T^2 - 3T^3 + T^4) (2 - 2T + 5T^2 - 2T^3 + 2T^4)}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{Alternating}, 332], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (1 - 5T + 9T^2 - 5T^3 + T^4)}{T^4}, \right. \right. \\
& \quad \left. \left. - \frac{(-1 + T)^2 (1 - T + T^2)^2 (1 - 10T + 30T^2 - 44T^3 + 30T^4 - 10T^5 + T^6)}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{NonAlternating}, 66], \text{False}, \left\{ \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right. \right. \\
& \quad \left. \left. - \frac{(-1 + T)^2 (1 - 12T + 59T^2 - 156T^3 + 251T^4 - 292T^5 + 251T^6 - 156T^7 + 59T^8 - 12T^9 + T^{10})}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{NonAlternating}, 71], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right. \right. \\
& \quad \left. \left. - \frac{(-1 + T)^2 (1 - T + T^2)^2 (5 - 14T + 36T^2 - 44T^3 + 36T^4 - 14T^5 + 5T^6)}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{NonAlternating}, 72], \text{False}, \left\{ - \frac{(-2 + T) (-1 + 2T) (1 - T + T^2)^2}{T^3}, \right. \right. \\
& \quad \left. \left. - \frac{(-1 + T)^2 (1 - T + T^2)^2 (9 - 46T + 84T^2 - 100T^3 + 84T^4 - 46T^5 + 9T^6)}{T^6} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{NonAlternating}, 73], \text{False}, \left\{ \frac{(1 - T + T^2)^2}{T^2}, \frac{4(-1 + T)^2 (1 - T + T^2)^2}{T^3} \right\} \right\}}, \\
& \left\{ \text{Knot}[11, \text{NonAlternating}, 74], \text{False}, \left\{ \frac{(1 - T + T^2)^2}{T^2}, \frac{4(-1 + T)^2 (1 - T + T^2)^2}{T^3} \right\} \right\}},
\end{aligned}$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 75], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right. \right.$$

$$\left. \frac{(-1 + T)^2 (1 - T + T^2)^2 (5 - 14T + 36T^2 - 44T^3 + 36T^4 - 14T^5 + 5T^6)}{T^6} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 76], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (1 - T + T^2 - T^3 + T^4)}{T^4}, \right. \right.$$

$$\left. \frac{(-1 + T)^2 (1 - T + T^2)^2 (2 - 4T + 9T^2 - 6T^3 + 10T^4 - 8T^5 + 10T^6 - 6T^7 + 9T^8 - 4T^9 + 2T^{10})}{T^8} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 77], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (1 + T - 3T^2 + T^3 + T^4)}{T^4}, \right. \right.$$

$$\left. - \frac{2(-1 + T)^2 (1 - T + T^2)^2 (2 + 4T - 5T^2 + 16T^4 - 18T^5 + 16T^6 - 5T^8 + 4T^9 + 2T^{10})}{T^8} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 78], \text{False}, \left\{ \frac{(1 - T + T^2)^2 (1 - T + T^2 - T^3 + T^4)}{T^4}, \right. \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - T + T^2)^2 (2 - 4T + 9T^2 - 6T^3 + 10T^4 - 8T^5 + 10T^6 - 6T^7 + 9T^8 - 4T^9 + 2T^{10})}{T^8} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 81], \text{False}, \left\{ - \frac{(1 - T + T^2)^2 (1 - T - T^2 - T^3 + T^4)}{T^4}, \right. \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - T + T^2)^2 (1 + T + T^2) (3 - 9T + 6T^2 - T^3 - 2T^4 - T^5 + 6T^6 - 9T^7 + 3T^8)}{T^8} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 85], \text{False}, \left\{ - \frac{(1 - 3T + T^2) (1 - T + T^2)^2}{T^3}, \right. \right.$$

$$\left. - \frac{4(-1 + T)^4 (1 - 3T + T^2) (1 - T + T^2)}{T^4} \right\} \left. \right\}, \left\{ \text{Knot}[11, \text{NonAlternating}, 106], \right.$$

$$\text{False}, \left\{ \frac{(1 - T + T^2)^3}{T^3}, \frac{(-1 + T)^2 (1 - T + T^2)^2 (1 - 2T + 4T^3 - 2T^5 + T^6)}{T^6} \right\} \left. \right\},$$

$$\left\{ \text{Knot}[11, \text{NonAlternating}, 164], \text{False}, \right.$$

$$\left\{ - \frac{(1 - 3T + T^2) (1 - T + T^2)^2}{T^3}, - \frac{2(-1 + T)^4 (1 - T + T^2)^2 (1 - 4T - 4T^3 + T^4)}{T^6} \right\} \left. \right\}$$

In[ ]:= `p /@ {"K11n34", "K11n42"}`

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

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

Out[\*]=

$$\left\{ \left\{ 1, -\frac{2(-1+T)^2(1+T^4)}{T^3} \right\}, \left\{ 1, -\frac{2(-1+T)^2(1+T^4)}{T^3} \right\} \right\}$$

```
In[*]:= Table[gcd = PolynomialGCD[ρ[K][[1]], ∂Tρ[K][[1]]];
  If[Head[Expand@gcd] === Plus,
    Echo@{K, MemberQ[Ribbons, K], Factor@PolynomialRemainder[ρ[K][[2]], gcd, T]},
    Nothing
  ], {K, AllKnots[{3, 10}]}
```

- » {Knot[8, 10], False, 0}
- » {Knot[8, 18], False, 0}
- » {Knot[8, 20], True, 0}
- » {Knot[9, 24], False, 0}
- » {Knot[9, 40], False, 0}
- » {Knot[10, 59], False, 0}
- » {Knot[10, 62], False, 0}
- » {Knot[10, 65], False, 0}
- » {Knot[10, 77], False, 0}
- » {Knot[10, 82], False, 0}
- » {Knot[10, 87], True, 0}
- » {Knot[10, 98], False, 0}
- » {Knot[10, 99], True, 0}
- » {Knot[10, 123], True, 0}
- » {Knot[10, 137], True, 0}
- » {Knot[10, 140], True, 0}
- » {Knot[10, 143], False, 0}

Out[\*]=

- ```
{ {Knot[8, 10], False, 0}, {Knot[8, 18], False, 0},
  {Knot[8, 20], True, 0}, {Knot[9, 24], False, 0}, {Knot[9, 40], False, 0},
  {Knot[10, 59], False, 0}, {Knot[10, 62], False, 0}, {Knot[10, 65], False, 0},
  {Knot[10, 77], False, 0}, {Knot[10, 82], False, 0}, {Knot[10, 87], True, 0},
  {Knot[10, 98], False, 0}, {Knot[10, 99], True, 0}, {Knot[10, 123], True, 0},
  {Knot[10, 137], True, 0}, {Knot[10, 140], True, 0}, {Knot[10, 143], False, 0} }
```

```
In[*]:= Table[
  {ρ0, ρ1} = ρ[K];
  gcd = PolynomialGCD[ρ0, ∂Tρ0];
  If[PolynomialRemainder[ρ1, gcd, T] != 0,
    Echo@{K, ρ0, ρ1, Factor@PolynomialRemainder[ρ1, gcd, T]},
    Nothing
  ], {K, AllKnots[{3, 14}]}
```

- $$\gg \left\{ \text{Knot}[11, \text{NonAlternating}, 66], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - 12T + 59T^2 - 156T^3 + 251T^4 - 292T^5 + 251T^6 - 156T^7 + 59T^8 - 12T^9 + T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{Alternating}, 169], \frac{(2 - 3T + 2T^2)^2}{T^2}, \frac{2(-1 + T)^2 (7 - 28T + 68T^2 - 88T^3 + 68T^4 - 28T^5 + 7T^6)}{T^4}, \frac{7}{8} \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{Alternating}, 302], \frac{(1 - T + T^2) (2 - 3T + 2T^2)^2}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (24 - 136T + 432T^2 - 888T^3 + 1337T^4 - 1520T^5 + 1337T^6 - 888T^7 + 432T^8 - 136T^9 + 24T^{10})}{T^6}, \frac{7}{8} \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{Alternating}, 719], \frac{(1 - T + T^2) (2 - 3T + 2T^2)^2}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (24 - 136T + 426T^2 - 832T^3 + 1197T^4 - 1336T^5 + 1197T^6 - 832T^7 + 426T^8 - 136T^9 + 24T^{10})}{T^6}, \frac{7}{2} \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{Alternating}, 799], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (5 - 66T + 341T^2 - 954T^3 + 1667T^4 - 1984T^5 + 1667T^6 - 954T^7 + 341T^8 - 66T^9 + 5T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{NonAlternating}, 499], - \frac{(1 - 3T + T^2) (1 - T + T^2)^2}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (2 - 18T + 51T^2 - 68T^3 + 51T^4 - 18T^5 + 2T^6)}{T^4}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{NonAlternating}, 666], \frac{(1 - T + T^2)^4}{T^4}, \right.$$

$$\left. - \frac{2(-1 + T)^2 (1 - T + T^2)^2 (1 - T + T^2 - T^3 + T^4) (1 - 3T + 10T^2 - 8T^3 + 10T^4 - 3T^5 + T^6)}{T^8}, 6T(1 - T + T^2)^2 \right\}$$
- $$\gg \left\{ \text{Knot}[12, \text{NonAlternating}, 841], - \frac{(-2 + T) (-1 + 2T) (1 - T + T^2)^2}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (1 - 8T + 39T^2 - 132T^3 + 271T^4 - 340T^5 + 271T^6 - 132T^7 + 39T^8 - 8T^9 + T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 83], - \frac{(-2 + T) (-1 + 2T) (1 - T + T^2)^3}{T^4}, \frac{1}{T^8}, \right.$$

$$\left. \frac{(-1 + T)^2 (5 - 44T + 201T^2 - 598T^3 + 1258T^4 - 2006T^5 + 2588T^6 - 2800T^7 + 2588T^8 - 2006T^9 + 1258T^{10} - 598T^{11} + 201T^{12} - 44T^{13} + 5T^{14})}{T^4}, 2(1 + 4T - 4T^2 + 2T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 110], \frac{(-2 + T)^2 (-1 + 2T)^2}{T^2}, \right.$$

$$\left. - \frac{2(-1 + T)^2 (7 - 56T + 168T^2 - 240T^3 + 168T^4 - 56T^5 + 7T^6)}{T^4}, \frac{9}{8} \right\}$$



- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 776], \frac{(-2 + T)^2 (-1 + 2 T)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (24 - 232 T + 944 T^2 - 2204 T^3 + 3445 T^4 - 3960 T^5 + 3445 T^6 - 2204 T^7 + 944 T^8 - 232 T^9 + 24 T^{10})}{T^6}, \frac{9}{8} \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 2188], - \frac{(1 - T + T^2)^2 (5 - 11 T + 5 T^2)}{T^3}, \right.$$

$$\left. - \frac{2 (-1 + T)^2 (8 - 52 T + 183 T^2 - 456 T^3 + 785 T^4 - 938 T^5 + 785 T^6 - 456 T^7 + 183 T^8 - 52 T^9 + 8 T^{10})}{T^6}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 2202], - \frac{(1 - 3 T + T^2) (1 - T + T^2)^2 (2 - 3 T + 2 T^2)}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (5 - 54 T + 270 T^2 - 858 T^3 + 1939 T^4 - 3298 T^5 + 4457 T^6 - 4908 T^7 + 4457 T^8 - 3298 T^9 + 1939 T^{10} - 858 T^{11} + 270 T^{12} - 54 T^{13} + 5 T^{14}), 6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 3201], - \frac{(-2 + T) (-1 + 2 T) (1 - T + T^2)^3}{T^4}, \frac{1}{T^8} \right.$$

$$\left. (-1 + T)^2 (5 - 46 T + 213 T^2 - 636 T^3 + 1332 T^4 - 2124 T^5 + 2744 T^6 - 2972 T^7 + 2744 T^8 - 2124 T^9 + 1332 T^{10} - 636 T^{11} + 213 T^{12} - 46 T^{13} + 5 T^{14}), 2 (-1 + 2 T) (5 - 6 T + 4 T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 3710], \frac{(-2 + T) (-1 + 2 T) (1 - 3 T + T^2) (1 - T + T^2)^2}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (1 - 8 T + 26 T^2 - 68 T^3 + 233 T^4 - 680 T^5 + 1293 T^6 - 1592 T^7 + 1293 T^8 - 680 T^9 + 233 T^{10} - 68 T^{11} + 26 T^{12} - 8 T^{13} + T^{14}), 6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{Alternating}, 3730], - \frac{(1 - 3 T + T^2) (1 - T + T^2)^4}{T^5}, \right.$$

$$\left. - \frac{2 (-1 + T)^2 (1 - T + T^2)^2 (2 - 12 T + 41 T^2 - 86 T^3 + 108 T^4 - 86 T^5 + 41 T^6 - 12 T^7 + 2 T^8)}{T^7}, -6 T (1 - T + T^2)^2 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 62], \frac{(1 - T + T^2)^2}{T^2}, - \frac{2 (-1 + T)^2 (7 - 10 T + 7 T^2)}{T^2}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 140], \frac{(1 - T + T^2)^3}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - 6 T + 25 T^2 - 42 T^3 + 63 T^4 - 68 T^5 + 63 T^6 - 42 T^7 + 25 T^8 - 6 T^9 + T^{10})}{T^6}, -2 (1 + 4 T - 4 T^2 + 2 T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 282], \frac{(1 - 3 T + T^2)^2}{T^2}, \frac{2 (-1 + T)^4 (-3 + 2 T) (-2 + 3 T)}{T^3}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 682], \frac{(1 - 3 T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - 18 T + 97 T^2 - 262 T^3 + 439 T^4 - 516 T^5 + 439 T^6 - 262 T^7 + 97 T^8 - 18 T^9 + T^{10})}{T^6}, 10 \right\}$$

- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 1466], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - 18T + 103T^2 - 294T^3 + 507T^4 - 604T^5 + 507T^6 - 294T^7 + 103T^8 - 18T^9 + T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 1530], - \frac{(1 - 3T + T^2) (1 - T + T^2)^3}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (1 - 10T + 48T^2 - 148T^3 + 313T^4 - 484T^5 + 607T^6 - 648T^7 + 607T^8 - 484T^9 + 313T^{10} - 148T^{11} + 48T^{12} - 10T^{13} + T^{14}), 2 (1 + 4T - 4T^2 + 2T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 2006], \frac{(2 - 3T + 2T^2)^2}{T^2}, \right.$$

$$\left. \frac{4(-1 + T)^2 (4 - 17T + 46T^2 - 62T^3 + 46T^4 - 17T^5 + 4T^6)}{T^4}, \frac{7}{2} \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 2593], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (5 - 62T + 315T^2 - 878T^3 + 1519T^4 - 1792T^5 + 1519T^6 - 878T^7 + 315T^8 - 62T^9 + 5T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 2648], \frac{(1 - T + T^2)^3}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (1 - 4T + 7T^2 - T^4 + 4T^5 - T^6 + 7T^8 - 4T^9 + T^{10})}{T^6}, 2(-1 + 2T)(5 - 6T + 4T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 2797], \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (5 - 30T + 101T^2 - 194T^3 + 287T^4 - 320T^5 + 287T^6 - 194T^7 + 101T^8 - 30T^9 + 5T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 2890], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (5 - 74T + 417T^2 - 1250T^3 + 2291T^4 - 2776T^5 + 2291T^6 - 1250T^7 + 417T^8 - 74T^9 + 5T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4044], \frac{(1 - 3T + T^2)^2}{T^2}, \right.$$

$$\left. \frac{2(-1 + T)^2 (1 - 6T + 17T^2 - 31T^3 + 40T^4 - 31T^5 + 17T^6 - 6T^7 + T^8)}{T^5}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4356], \frac{(1 - T + T^2)^2}{T^2}, \right.$$

$$\left. - \frac{2(-1 + T)^2 (1 - 4T + T^2 + 15T^3 - 24T^4 + 15T^5 + T^6 - 4T^7 + T^8)}{T^5}, -6 \right\}$$

- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4369], -\frac{(1-3T+T^2)(1-T+T^2)^3}{T^4}, \right.$   
 $\frac{1}{T^8}(-1+T)^2(1-12T+62T^2-202T^3+469T^4-810T^5+1113T^6-1232T^7+$   
 $1113T^8-810T^9+469T^{10}-202T^{11}+62T^{12}-12T^{13}+T^{14}), 2(1+4T-4T^2+2T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4518], \frac{(1-3T+5T^2-3T^3+T^4)^2}{T^4}, \right.$   
 $\frac{2(-1+T)^4(1-T+T^2)(3-16T+40T^2-51T^3+40T^4-16T^5+3T^6)}{T^6}, 2(-2+12T-9T^2+3T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4802], -\frac{(1-3T+T^2)(1-T+T^2)^2}{T^3}, \right.$   
 $-\frac{2(-1+T)^2(2-13T+42T^2-85T^3+106T^4-85T^5+42T^6-13T^7+2T^8)}{T^5}, 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4815], -\frac{(1-T+T^2)^2(2-4T+3T^2-4T^3+2T^4)}{T^4}, \right.$   
 $-\frac{1}{T^8}(-1+T)^2(5-30T+97T^2-222T^3+368T^4-490T^5+$   
 $564T^6-588T^7+564T^8-490T^9+368T^{10}-222T^{11}+97T^{12}-30T^{13}+5T^{14}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4840], -\frac{(1-T+T^2)^2(2-8T+11T^2-8T^3+2T^4)}{T^4}, \right.$   
 $\frac{1}{T^8}(-1+T)^2(5-48T+221T^2-660T^3+1410T^4-2296T^5+3016T^6-$   
 $3288T^7+3016T^8-2296T^9+1410T^{10}-660T^{11}+221T^{12}-48T^{13}+5T^{14}), 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 4987], -\frac{(-2+T)(-1+2T)(1-T+T^2)^3}{T^4}, \right.$   
 $\frac{1}{T^8}(-1+T)^2(5-42T+179T^2-510T^3+1044T^4-1638T^5+2094T^6-2260T^7+$   
 $2094T^8-1638T^9+1044T^{10}-510T^{11}+179T^{12}-42T^{13}+5T^{14}), 2(1+4T-4T^2+2T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 5053], -\frac{(1-T+T^2)^2(2-5T+5T^2-5T^3+2T^4)}{T^4}, \right.$   
 $-\frac{1}{T^8}(-1+T)^2(5-34T+122T^2-302T^3+539T^4-758T^5+901T^6-$   
 $948T^7+901T^8-758T^9+539T^{10}-302T^{11}+122T^{12}-34T^{13}+5T^{14}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[13, \text{NonAlternating}, 5089], \frac{(1-T+T^2)(1-2T+T^2-2T^3+T^4)^2}{T^5}, \right.$   
 $-\frac{1}{T^{10}}(-1+T)^2(1-8T+31T^2-80T^3+156T^4-232T^5+276T^6-296T^7+293T^8-292T^9+293T^{10}-$   
 $296T^{11}+276T^{12}-232T^{13}+156T^{14}-80T^{15}+31T^{16}-8T^{17}+T^{18}), -2(-1+2T)(-3-6T+4T^2) \left. \right\}$

- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 1073], \frac{(1 - 3T + T^2)^2 (1 - T + T^2) (2 - 3T + 2T^2)}{T^4}, \right.$   
 $-\frac{1}{T^8} (-1 + T)^4 (9 - 116T + 634T^2 - 1978T^3 + 4080T^4 -$   
 $6140T^5 + 6986T^6 - 6140T^7 + 4080T^8 - 1978T^9 + 634T^{10} - 116T^{11} + 9T^{12}), 50 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 1235], \frac{(1 - 3T + T^2)^2 (1 - T + T^2) (2 - 3T + 2T^2)}{T^4}, \right.$   
 $-\frac{1}{T^8} (-1 + T)^4 (9 - 116T + 634T^2 - 1978T^3 + 4080T^4 -$   
 $6140T^5 + 6986T^6 - 6140T^7 + 4080T^8 - 1978T^9 + 634T^{10} - 116T^{11} + 9T^{12}), 50 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 1367], -\frac{(1 - T + T^2)^2 (3 - 15T + 23T^2 - 15T^3 + 3T^4)}{T^4}, \right.$   
 $\frac{1}{T^8} (-1 + T)^2 (12 - 140T + 729T^2 - 2320T^3 + 5175T^4 - 8720T^5 + 11699T^6 -$   
 $12856T^7 + 11699T^8 - 8720T^9 + 5175T^{10} - 2320T^{11} + 729T^{12} - 140T^{13} + 12T^{14}), 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 1469], -\frac{(1 - T + T^2)^2 (2 - 11T + 17T^2 - 11T^3 + 2T^4)}{T^4}, \right.$   
 $-\frac{1}{T^8} (-1 + T)^2 (5 - 64T + 359T^2 - 1182T^3 + 2646T^4 - 4382T^5 + 5766T^6 -$   
 $6280T^7 + 5766T^8 - 4382T^9 + 2646T^{10} - 1182T^{11} + 359T^{12} - 64T^{13} + 5T^{14}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 2763], \frac{(1 - T + T^2) (1 - 3T + 3T^2 - 3T^3 + T^4)^2}{T^5}, \frac{1}{T^{10}} \right.$   
 $(-1 + T)^2 (1 - 12T + 71T^2 - 276T^3 + 779T^4 - 1668T^5 + 2819T^6 - 3944T^7 + 4739T^8 - 5020T^9 + 4739T^{10} -$   
 $3944T^{11} + 2819T^{12} - 1668T^{13} + 779T^{14} - 276T^{15} + 71T^{16} - 12T^{17} + T^{18}), 2(-4 + 6T - 9T^2 + 3T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 3117], -\frac{(1 - T + T^2)^2 (3 - 13T + 19T^2 - 13T^3 + 3T^4)}{T^4}, \right.$   
 $\frac{1}{T^8} 2(-1 + T)^2 (6 - 64T + 330T^2 - 1091T^3 + 2556T^4 - 4497T^5 + 6213T^6 -$   
 $6900T^7 + 6213T^8 - 4497T^9 + 2556T^{10} - 1091T^{11} + 330T^{12} - 64T^{13} + 6T^{14}), 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 3678], \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)^2}{T^4}, \right.$   
 $-\frac{1}{T^8} 2(-1 + T)^2 (2 - 3T + 2T^2) (2 - 10T + 41T^2 - 123T^3 + 275T^4 - 443T^5 +$   
 $522T^6 - 443T^7 + 275T^8 - 123T^9 + 41T^{10} - 10T^{11} + 2T^{12}), -6(-1 + T) (2 - 3T + 2T^2) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 4031], \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)^2}{T^4}, \right.$   
 $-\frac{1}{T^8} 2(-1 + T)^2 (2 - 3T + 2T^2) (2 - 10T + 41T^2 - 123T^3 + 275T^4 - 443T^5 +$   
 $522T^6 - 443T^7 + 275T^8 - 123T^9 + 41T^{10} - 10T^{11} + 2T^{12}), -6(-1 + T) (2 - 3T + 2T^2) \left. \right\}$

- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 4142], -\frac{(-2 + T)(-1 + 2T)(1 - 3T + T^2)^2(1 - T + T^2)}{T^4}, \right.$   
 $-\frac{1}{T^8}(-1 + T)^2(5 - 82T + 603T^2 - 2606T^3 + 7388T^4 - 14714T^5 + 21702T^6 -$   
 $24600T^7 + 21702T^8 - 14714T^9 + 7388T^{10} - 2606T^{11} + 603T^{12} - 82T^{13} + 5T^{14}), 10 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 4250], \frac{(1 - 3T + T^2)(1 - T + T^2)^2(1 - 5T + 7T^2 - 5T^3 + T^4)}{T^5}, \frac{1}{T^{10}} \right.$   
 $(-1 + T)^2(1 - 18T + 146T^2 - 724T^3 + 2504T^4 - 6472T^5 + 13011T^6 - 20958T^7 + 27660T^8 - 30292T^9 +$   
 $27660T^{10} - 20958T^{11} + 13011T^{12} - 6472T^{13} + 2504T^{14} - 724T^{15} + 146T^{16} - 18T^{17} + T^{18}), 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 5755], -\frac{(1 - 3T + T^2)^2(1 - 6T + 9T^2 - 6T^3 + T^4)}{T^4}, \right.$   
 $-\frac{1}{T^8}(-1 + T)^2(1 - 22T + 215T^2 - 1198T^3 + 4188T^4 - 9730T^5 + 15722T^6 -$   
 $18348T^7 + 15722T^8 - 9730T^9 + 4188T^{10} - 1198T^{11} + 215T^{12} - 22T^{13} + T^{14}), 10 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 5763], -\frac{(1 - 3T + T^2)(2 - 3T + 2T^2)^2}{T^3}, \right.$   
 $\frac{4(-1 + T)^2(2 - 22T + 102T^2 - 281T^3 + 509T^4 - 618T^5 + 509T^6 - 281T^7 + 102T^8 - 22T^9 + 2T^{10})}{T^6}, \frac{7}{8} \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 6007], \frac{(1 - T + T^2)^3(1 - 5T + 9T^2 - 5T^3 + T^4)}{T^5}, \frac{1}{T^{10}} \right.$   
 $(-1 + T)^2(1 - 14T + 97T^2 - 430T^3 + 1361T^4 - 3264T^5 + 6159T^6 - 9430T^7 + 12040T^8 - 13032T^9 + 12040T^{10} -$   
 $9430T^{11} + 6159T^{12} - 3264T^{13} + 1361T^{14} - 430T^{15} + 97T^{16} - 14T^{17} + T^{18}), 2(1 + 4T - 4T^2 + 2T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 6033], -\frac{(1 - T + T^2)^2(2 - 13T + 21T^2 - 13T^3 + 2T^4)}{T^4}, \right.$   
 $\frac{1}{T^8}(-1 + T)^2(5 - 74T + 448T^2 - 1548T^3 + 3577T^4 - 6024T^5 + 7987T^6 -$   
 $8716T^7 + 7987T^8 - 6024T^9 + 3577T^{10} - 1548T^{11} + 448T^{12} - 74T^{13} + 5T^{14}), 6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 6038], \frac{(1 - T + T^2)(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^5}, -\frac{1}{T^{10}} \right.$   
 $(-1 + T)^2(1 - 12T + 79T^2 - 344T^3 + 1093T^4 - 2662T^5 + 5143T^6 - 8074T^7 + 10501T^8 - 11444T^9 + 10501T^{10} -$   
 $8074T^{11} + 5143T^{12} - 2662T^{13} + 1093T^{14} - 344T^{15} + 79T^{16} - 12T^{17} + T^{18}), -2(-5 + 4T - 3T^2 + T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 6968], -\frac{(1 - 3T + T^2)(1 - T + T^2)^2(1 - 4T + 7T^2 - 4T^3 + T^4)}{T^5}, \right.$   
 $\frac{1}{T^8}(-1 + T)^2(3 - 42T + 270T^2 - 1072T^3 + 2945T^4 - 5908T^5 + 8895T^6 -$   
 $10180T^7 + 8895T^8 - 5908T^9 + 2945T^{10} - 1072T^{11} + 270T^{12} - 42T^{13} + 3T^{14}), 6 \left. \right\}$

- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 7078], -\frac{(1-3T+T^2)(1-T+T^2)^4}{T^5}, \right.$$

$$\frac{1}{T^{10}} 2(-1+T)^2(1-3T+T^2)(1-T+T^2)^2(1-7T+26T^2-61T^3+95T^4-$$

$$122T^5+132T^6-122T^7+95T^8-61T^9+26T^{10}-7T^{11}+T^{12}), -24T(1-T+T^2)^2 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 7378], \frac{(2-3T+2T^2)^3}{T^3}, \right.$$

$$\frac{(-1+T)^2(112-752T+2638T^2-5940T^3+9433T^4-10956T^5+9433T^6-5940T^7+2638T^8-752T^9+112T^{10})}{T^6},$$

$$\left. \frac{1}{8}(31-52T+48T^2-16T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 7734], \frac{(1-3T+T^2)^2(5-9T+5T^2)}{T^3}, \right.$$

$$\frac{(-1+T)^2(41-534T+2905T^2-8746T^3+16295T^4-19908T^5+16295T^6-8746T^7+2905T^8-534T^9+41T^{10})}{T^6}$$

$$\left. , 10 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 8428], \frac{(1-3T+T^2)^2(2-2T+T^2)(1-2T+2T^2)}{T^4}, \right.$$

$$-\frac{1}{T^8}(-1+T)^2(1-16T+132T^2-652T^3+2099T^4-4672T^5+7455T^6-$$

$$8696T^7+7455T^8-4672T^9+2099T^{10}-652T^{11}+132T^{12}-16T^{13}+T^{14}), -30 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 9449], \frac{(1-3T+T^2)^2(1-T+T^2)(2-3T+2T^2)}{T^4}, \right.$$

$$-\frac{1}{T^8}(-1+T)^2(9-132T+839T^2-3132T^3+7876T^4-14488T^5+20502T^6-$$

$$22944T^7+20502T^8-14488T^9+7876T^{10}-3132T^{11}+839T^{12}-132T^{13}+9T^{14}), 10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 9469], \frac{(1-3T+T^2)^2(1-2T+4T^2-5T^3+4T^4-2T^5+T^6)}{T^5}, \frac{1}{T^{10}} \right.$$

$$(-1+T)^2(1-14T+88T^2-344T^3+983T^4-2222T^5+4074T^6-6184T^7+7921T^8-8588T^9+$$

$$7921T^{10}-6184T^{11}+4074T^{12}-2222T^{13}+983T^{14}-344T^{15}+88T^{16}-14T^{17}+T^{18}), -10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 9607], \frac{(1-3T+T^2)^2(1-T+T^2)(2-3T+2T^2)}{T^4}, \right.$$

$$-\frac{1}{T^8}(-1+T)^2(1-16T+113T^2-492T^3+1504T^4-3336T^5+5384T^6-$$

$$6308T^7+5384T^8-3336T^9+1504T^{10}-492T^{11}+113T^{12}-16T^{13}+T^{14}), -30 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 10219], -\frac{(1-3T+T^2)(2-3T+2T^2)^2}{T^3}, \right.$$

$$\frac{2(-1+T)^2(4-44T+229T^2-732T^3+1483T^4-1876T^5+1483T^6-732T^7+229T^8-44T^9+4T^{10})}{T^6}, 14 \left. \right\}$$

- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 11070], \frac{(1 - T + T^2)(3 - 5T + 3T^2)^2}{T^3}, \frac{1}{T^6}(-1 + T)^2 \right.$   
 $\left. (145 - 932T + 3139T^2 - 6820T^3 + 10579T^4 - 12188T^5 + 10579T^6 - 6820T^7 + 3139T^8 - 932T^9 + 145T^{10}), \frac{1606}{729} \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 11158], \frac{(1 - T + T^2)^2(2 - 13T + 23T^2 - 13T^3 + 2T^4)}{T^4}, \right.$   
 $\left. \frac{(-1 + T)^4(1 - 12T + 62T^2 - 220T^3 + 602T^4 - 1124T^5 + 1364T^6 - 1124T^7 + 602T^8 - 220T^9 + 62T^{10} - 12T^{11} + T^{12})}{T^8}, -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 11570], \frac{(2 - 4T + 5T^2 - 4T^3 + 2T^4)^2}{T^4}, \right.$   
 $\left. -\frac{1}{T^8}2(-1 + T)^2(1 - T + T^2)(4 - 16T + 51T^2 - 133T^3 + 279T^4 - 427T^5 + \right.$   
 $\left. 492T^6 - 427T^7 + 279T^8 - 133T^9 + 51T^{10} - 16T^{11} + 4T^{12}), \frac{1}{4}(9 - 48T + 64T^2 - 32T^3) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 12035], \frac{(1 - T + T^2)^2(5 - 15T + 21T^2 - 15T^3 + 5T^4)}{T^4}, \right.$   
 $\left. -\frac{1}{T^8}2(-1 + T)^2(31 - 238T + 986T^2 - 2718T^3 + 5561T^4 - 8938T^5 + 11726T^6 - \right.$   
 $\left. 12804T^7 + 11726T^8 - 8938T^9 + 5561T^{10} - 2718T^{11} + 986T^{12} - 238T^{13} + 31T^{14}), 6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 12332], \frac{(2 - 3T + 2T^2)^3}{T^3}, \right.$   
 $\left. \frac{(-1 + T)^2(112 - 752T + 2624T^2 - 5816T^3 + 9105T^4 - 10516T^5 + 9105T^6 - 5816T^7 + 2624T^8 - 752T^9 + 112T^{10})}{T^6}, \right.$   
 $\left. -\frac{1}{4}(-5 + 2T)(4 - T + 2T^2) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 12814], \frac{(1 - T + T^2)(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^5}, \right.$   
 $\left. -\frac{1}{T^{10}}(-1 + T)^2(1 - 12T + 81T^2 - 358T^3 + 1131T^4 - 2690T^5 + 5015T^6 - 7580T^7 + 9575T^8 - 10320T^9 + 9575T^{10} - \right.$   
 $\left. 7580T^{11} + 5015T^{12} - 2690T^{13} + 1131T^{14} - 358T^{15} + 81T^{16} - 12T^{17} + T^{18}), -2(-5 + 4T - 3T^2 + T^3) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 12867], \frac{(1 - T + T^2)(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^5}, \right.$   
 $\left. -\frac{1}{T^{10}}(-1 + T)^2(1 - 12T + 81T^2 - 358T^3 + 1131T^4 - 2690T^5 + 5015T^6 - 7580T^7 + 9575T^8 - 10320T^9 + 9575T^{10} - \right.$   
 $\left. 7580T^{11} + 5015T^{12} - 2690T^{13} + 1131T^{14} - 358T^{15} + 81T^{16} - 12T^{17} + T^{18}), -2(-5 + 4T - 3T^2 + T^3) \right\}$

- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 12952], \frac{(1 - T + T^2)^2 (5 - 15T + 21T^2 - 15T^3 + 5T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} 2(-1 + T)^2 (6 - 38T + 164T^2 - 549T^3 + 1431T^4 - 2831T^5 + 4257T^6 -$$

$$4872T^7 + 4257T^8 - 2831T^9 + 1431T^{10} - 549T^{11} + 164T^{12} - 38T^{13} + 6T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 13007], \frac{(1 - T + T^2)^3 (2 - 3T + 3T^2 - 3T^3 + 2T^4)}{T^5}, \frac{1}{T^{10}} \right.$$

$$(-1 + T)^2 (1 + T^2) (5 - 32T + 129T^2 - 364T^3 + 777T^4 - 1284T^5 + 1716T^6 - 1944T^7 + 2006T^8 - 1944T^9 +$$

$$1716T^{10} - 1284T^{11} + 777T^{12} - 364T^{13} + 129T^{14} - 32T^{15} + 5T^{16}), 2(-1 + 2T) (5 - 6T + 4T^2) \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 13016], \frac{(1 - T + T^2)^3 (2 - 3T + 3T^2 - 3T^3 + 2T^4)}{T^5}, \frac{1}{T^{10}} \right.$$

$$(-1 + T)^2 (1 + T^2) (5 - 32T + 129T^2 - 364T^3 + 777T^4 - 1284T^5 + 1716T^6 - 1944T^7 + 2006T^8 - 1944T^9 +$$

$$1716T^{10} - 1284T^{11} + 777T^{12} - 364T^{13} + 129T^{14} - 32T^{15} + 5T^{16}), 2(-1 + 2T) (5 - 6T + 4T^2) \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 13044], \frac{(1 - T + T^2)^2 (5 - 15T + 21T^2 - 15T^3 + 5T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} 2(-1 + T)^2 (6 - 38T + 164T^2 - 549T^3 + 1431T^4 - 2831T^5 + 4257T^6 -$$

$$4872T^7 + 4257T^8 - 2831T^9 + 1431T^{10} - 549T^{11} + 164T^{12} - 38T^{13} + 6T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 13819], \frac{(1 - 3T + T^2)^2 (1 - 3T + 7T^2 - 9T^3 + 7T^4 - 3T^5 + T^6)}{T^5}, \frac{1}{T^{10}} \right.$$

$$(-1 + T)^2 (1 - 16T + 120T^2 - 572T^3 + 1965T^4 - 5160T^5 + 10678T^6 - 17772T^7 + 24051T^8 - 26580T^9 +$$

$$24051T^{10} - 17772T^{11} + 10678T^{12} - 5160T^{13} + 1965T^{14} - 572T^{15} + 120T^{16} - 16T^{17} + T^{18}), -10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 14548], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)^3}{T^5}, \right.$$

$$-\frac{1}{T^{10}} (-1 + T)^2 (1 - T + T^2)^2 (1 - 14T + 80T^2 - 272T^3 + 631T^4 - 1054T^5 + 1327T^6 - 1392T^7 +$$

$$1327T^8 - 1054T^9 + 631T^{10} - 272T^{11} + 80T^{12} - 14T^{13} + T^{14}), -40(-8 + 3T) (1 - T + T^2)^2 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 14871], \frac{(1 - 3T + T^2) (1 - T + T^2)^2 (1 - 5T + 7T^2 - 5T^3 + T^4)}{T^5}, \right.$$

$$-\frac{1}{T^{10}} (-1 + T)^2 (1 - 18T + 144T^2 - 686T^3 + 2210T^4 - 5196T^5 + 9419T^6 - 13798T^7 + 17012T^8 - 18172T^9 +$$

$$17012T^{10} - 13798T^{11} + 9419T^{12} - 5196T^{13} + 2210T^{14} - 686T^{15} + 144T^{16} - 18T^{17} + T^{18}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 14970], \frac{(1 - T + T^2)^2 (1 - 7T + 19T^2 - 25T^3 + 19T^4 - 7T^5 + T^6)}{T^5}, \frac{1}{T^{10}} \right.$$

$$(-1 + T)^2 (1 - 16T + 116T^2 - 518T^3 + 1615T^4 - 3750T^5 + 6774T^6 - 9918T^7 + 12233T^8 - 13068T^9 +$$

$$12233T^{10} - 9918T^{11} + 6774T^{12} - 3750T^{13} + 1615T^{14} - 518T^{15} + 116T^{16} - 16T^{17} + T^{18}), 6 \left. \right\}$$



- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 15\,320], \frac{(1 - T + T^2)^2 (2 - 7T + 12T^2 - 13T^3 + 12T^4 - 7T^5 + 2T^6)}{T^5}, \right.$   
 $-\frac{1}{T^{10}} (-1 + T)^2 (5 - 42T + 193T^2 - 618T^3 + 1517T^4 - 2982T^5 + 4857T^6 - 6728T^7 + 8116T^8 - 8624T^9 +$   
 $8116T^{10} - 6728T^{11} + 4857T^{12} - 2982T^{13} + 1517T^{14} - 618T^{15} + 193T^{16} - 42T^{17} + 5T^{18}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 15\,385], -\frac{(1 - 3T + T^2) (1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^5}, \right.$   
 $-\frac{1}{T^8} 2 (-1 + T)^2 (1 - 3T + T^2) (2 - 19T + 94T^2 - 305T^3 + 688T^4 - 1113T^5 +$   
 $1304T^6 - 1113T^7 + 688T^8 - 305T^9 + 94T^{10} - 19T^{11} + 2T^{12}), -2 (3 + 8T - 6T^2 + 2T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 15\,440], \frac{(1 - T + T^2)^4 (2 - 3T + 2T^2)}{T^5}, \frac{1}{T^{10}} (-1 + T)^2 \right.$   
 $(5 - 42T + 207T^2 - 708T^3 + 1838T^4 - 3772T^5 + 6348T^6 - 8990T^7 + 10979T^8 - 11712T^9 + 10979T^{10} - 8990T^{11} +$   
 $6348T^{12} - 3772T^{13} + 1838T^{14} - 708T^{15} + 207T^{16} - 42T^{17} + 5T^{18}), 2 (-13 + 34T - 44T^2 + 30T^3 - 12T^4 + 2T^5) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 15\,948], \frac{(1 - 3T + T^2)^2 (2 - 4T + 5T^2 - 4T^3 + 2T^4)}{T^4}, \right.$   
 $-\frac{1}{T^8} (-1 + T)^2 (9 - 126T + 737T^2 - 2480T^3 + 5590T^4 - 9336T^5 + 12366T^6 -$   
 $13512T^7 + 12366T^8 - 9336T^9 + 5590T^{10} - 2480T^{11} + 737T^{12} - 126T^{13} + 9T^{14}), 40 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 18\,186], -\frac{(2 - 3T + 2T^2)^2 (1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \right.$   
 $\frac{1}{T^8} (-1 + T)^2 (24 - 232T + 1058T^2 - 3116T^3 + 6659T^4 - 10992T^5 + 14630T^6 -$   
 $16052T^7 + 14630T^8 - 10992T^9 + 6659T^{10} - 3116T^{11} + 1058T^{12} - 232T^{13} + 24T^{14}), \frac{7}{2} \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 18\,985], \frac{(1 - T + T^2)^2 (1 - 7T + 16T^2 - 19T^3 + 16T^4 - 7T^5 + T^6)}{T^5}, \right.$   
 $-\frac{1}{T^{10}} (-1 + T)^4 (1 - 14T + 80T^2 - 280T^3 + 695T^4 - 1268T^5 + 1804T^6 - 2162T^7 +$   
 $2266T^8 - 2162T^9 + 1804T^{10} - 1268T^{11} + 695T^{12} - 280T^{13} + 80T^{14} - 14T^{15} + T^{16}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{Alternating}, 19\,127], \frac{(1 - T + T^2)^2 (1 - 6T + 10T^2 - 9T^3 + 10T^4 - 6T^5 + T^6)}{T^5}, \right.$   
 $\frac{1}{T^{10}} (-1 + T)^2 (1 - 14T + 84T^2 - 306T^3 + 794T^4 - 1544T^5 + 2333T^6 - 2926T^7 + 3236T^8 -$   
 $3324T^9 + 3236T^{10} - 2926T^{11} + 2333T^{12} - 1544T^{13} + 794T^{14} - 306T^{15} + 84T^{16} - 14T^{17} + T^{18}), 6 \left. \right\}$

- $$\gg \left\{ \text{Knot}[14, \text{Alternating}, 19263], -\frac{(1 - T + T^2)^2 (4 - 12T + 15T^2 - 12T^3 + 4T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} 2(-1 + T)^2 (12 - 96T + 390T^2 - 1076T^3 + 2210T^4 - 3578T^5 + 4719T^6 -$$

$$5166T^7 + 4719T^8 - 3578T^9 + 2210T^{10} - 1076T^{11} + 390T^{12} - 96T^{13} + 12T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 567], -\frac{(-2 + T)(-1 + 2T)(1 - T + T^2)^2}{T^3}, \right.$$

$$\frac{(-1 + T)^2 (3 - 20T + 83T^2 - 244T^3 + 469T^4 - 576T^5 + 469T^6 - 244T^7 + 83T^8 - 20T^9 + 3T^{10})}{T^6}, 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 1023], -\frac{(-2 + T)(-1 + 2T)(1 - T + T^2)^2}{T^3}, \right.$$

$$-\frac{(-1 + T)^2 (1 - 3T + T^2)(1 - 3T + 29T^2 - 92T^3 + 128T^4 - 92T^5 + 29T^6 - 3T^7 + T^8)}{T^6}, -24 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 2298], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$-\frac{(-1 + T)^2 (1 - 8T + T^2)(5 - 44T + 164T^2 - 332T^3 + 415T^4 - 332T^5 + 164T^6 - 44T^7 + 5T^8)}{T^6}, 50 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 2379], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$-\frac{(-1 + T)^2 (1 - 8T + T^2)(5 - 44T + 164T^2 - 332T^3 + 415T^4 - 332T^5 + 164T^6 - 44T^7 + 5T^8)}{T^6}, 50 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3219], \frac{(1 - T + T^2)^2 (6 - 11T + 6T^2)}{T^3}, \right.$$

$$\frac{(-1 + T)^2 (57 - 312T + 1089T^2 - 2548T^3 + 4211T^4 - 4956T^5 + 4211T^6 - 2548T^7 + 1089T^8 - 312T^9 + 57T^{10})}{T^6}, 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3223], \frac{(1 - T + T^2)^2 (4 - 7T + 4T^2)}{T^3}, \right.$$

$$\frac{2(-1 + T)^2 (14 - 62T + 123T^2 - 118T^3 + 45T^4 + 4T^5 + 45T^6 - 118T^7 + 123T^8 - 62T^9 + 14T^{10})}{T^6}, 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3266], -\frac{(1 - 3T + T^2)^2 (1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (1 - 16T + 112T^2 - 444T^3 + 1095T^4 - 1808T^5 + 2227T^6 -$$

$$2344T^7 + 2227T^8 - 1808T^9 + 1095T^{10} - 444T^{11} + 112T^{12} - 16T^{13} + T^{14}), 10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3345], \frac{(1 - T + T^2)^2 (5 - 9T + 5T^2)}{T^3}, \right.$$

$$\frac{(-1 + T)^2 (41 - 224T + 773T^2 - 1784T^3 + 2927T^4 - 3436T^5 + 2927T^6 - 1784T^7 + 773T^8 - 224T^9 + 41T^{10})}{T^6}, 6 \left. \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3347], \frac{(1 - T + T^2)^2 (3 - 5T + 3T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (8 - 32T + 59T^2 - 52T^3 + 17T^4 + 6T^5 + 17T^6 - 52T^7 + 59T^8 - 32T^9 + 8T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3397], \frac{(1 - T + T^2)^2 (5 - 9T + 5T^2)}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (41 - 224T + 773T^2 - 1784T^3 + 2927T^4 - 3436T^5 + 2927T^6 - 1784T^7 + 773T^8 - 224T^9 + 41T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3399], \frac{(1 - T + T^2)^2 (3 - 5T + 3T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (8 - 32T + 59T^2 - 52T^3 + 17T^4 + 6T^5 + 17T^6 - 52T^7 + 59T^8 - 32T^9 + 8T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3760], \frac{(1 - T + T^2)^2 (3 - 5T + 5T^2 - 5T^3 + 3T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} (-1 + T)^2 (21 - 110T + 382T^2 - 894T^3 + 1617T^4 - 2358T^5 + 2937T^6 -$$

$$3144T^7 + 2937T^8 - 2358T^9 + 1617T^{10} - 894T^{11} + 382T^{12} - 110T^{13} + 21T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3762], \frac{(1 - T + T^2)^2 (1 + T - 3T^2 + T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{2(-1 + T)^2 (2 - 3T + 5T^3 + 7T^4 - 29T^5 + 57T^6 - 66T^7 + 57T^8 - 29T^9 + 7T^{10} + 5T^{11} - 3T^{13} + 2T^{14})}{T^8}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3778], -\frac{(1 - 3T + T^2)^2 (1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (1 - 16T + 112T^2 - 444T^3 + 1095T^4 - 1808T^5 + 2227T^6 -$$

$$2344T^7 + 2227T^8 - 1808T^9 + 1095T^{10} - 444T^{11} + 112T^{12} - 16T^{13} + T^{14}), 10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3859], \frac{(1 - T + T^2)^2 (3 - 5T + 5T^2 - 5T^3 + 3T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} (-1 + T)^2 (21 - 110T + 382T^2 - 894T^3 + 1617T^4 - 2358T^5 + 2937T^6 -$$

$$3144T^7 + 2937T^8 - 2358T^9 + 1617T^{10} - 894T^{11} + 382T^{12} - 110T^{13} + 21T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 3861], \frac{(1 - T + T^2)^2 (1 + T - 3T^2 + T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{2(-1 + T)^2 (2 - 3T + 5T^3 + 7T^4 - 29T^5 + 57T^6 - 66T^7 + 57T^8 - 29T^9 + 7T^{10} + 5T^{11} - 3T^{13} + 2T^{14})}{T^8}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4104], \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)^2}{T^3}, \right.$$

$$\left. -\frac{(-1 + T)^2 (18 - 102T + 308T^2 - 604T^3 + 877T^4 - 984T^5 + 877T^6 - 604T^7 + 308T^8 - 102T^9 + 18T^{10})}{T^6}, -\frac{7}{32} \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4140], \frac{(1 - T + T^2)^2 (6 - 11T + 6T^2)}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (57 - 312T + 1089T^2 - 2548T^3 + 4211T^4 - 4956T^5 + 4211T^6 - 2548T^7 + 1089T^8 - 312T^9 + 57T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4142], \frac{(1 - T + T^2)^2 (4 - 7T + 4T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (14 - 62T + 123T^2 - 118T^3 + 45T^4 + 4T^5 + 45T^6 - 118T^7 + 123T^8 - 62T^9 + 14T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4220], \frac{(1 - T + T^2) (2 - 3T + 2T^2)^2}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (18 - 102T + 308T^2 - 604T^3 + 877T^4 - 984T^5 + 877T^6 - 604T^7 + 308T^8 - 102T^9 + 18T^{10})}{T^6}, -\frac{7}{32} \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4383], \frac{(1 - T + T^2)^2 (3 - 7T + 9T^2 - 7T^3 + 3T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} (-1 + T)^2 (21 - 136T + 507T^2 - 1256T^3 + 2342T^4 - 3484T^5 + 4358T^6 -$$

$$4676T^7 + 4358T^8 - 3484T^9 + 2342T^{10} - 1256T^{11} + 507T^{12} - 136T^{13} + 21T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4628], - \frac{(1 - T + T^2)^2 (2 - 10T + 15T^2 - 10T^3 + 2T^4)}{T^4}, \right.$$

$$- \frac{1}{T^8} (-1 + T)^2 (5 - 58T + 298T^2 - 920T^3 + 1967T^4 - 3168T^5 + 4109T^6 -$$

$$4456T^7 + 4109T^8 - 3168T^9 + 1967T^{10} - 920T^{11} + 298T^{12} - 58T^{13} + 5T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4634], - \frac{(1 - T + T^2)^2 (1 - 4T + 3T^2 - T^3 + 3T^4 - 4T^5 + T^6)}{T^5}, \right.$$

$$- \frac{1}{T^{10}} (-1 + T)^2 (1 + T^2) (2 - 20T + 83T^2 - 192T^3 + 286T^4 - 304T^5 + 284T^6 - 272T^7 +$$

$$276T^8 - 272T^9 + 284T^{10} - 304T^{11} + 286T^{12} - 192T^{13} + 83T^{14} - 20T^{15} + 2T^{16}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4736], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$- \frac{(-1 + T)^2 (3 - 3T + T^2) (1 - 3T + 3T^2) (1 - 14T + 38T^2 - 44T^3 + 38T^4 - 14T^5 + T^6)}{T^6}, 40 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4750], \frac{(1 - 3T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$- \frac{(-1 + T)^2 (5 - 74T + 441T^2 - 1390T^3 + 2615T^4 - 3200T^5 + 2615T^6 - 1390T^7 + 441T^8 - 74T^9 + 5T^{10})}{T^6}, 10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 4922], \frac{(1 - 3T + T^2)^2}{T^2}, \right.$$

$$\frac{2(-1 + T)^2 (1 - 7T + 25T^2 - 55T^3 + 74T^4 - 55T^5 + 25T^6 - 7T^7 + T^8)}{T^5}, 10 \left. \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 5731], -\frac{(1 - T + T^2)^2 (1 - 6T + 9T^2 - 6T^3 + T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (1 - 16T + 105T^2 - 388T^3 + 960T^4 - 1716T^5 + 2388T^6 -$$

$$2652T^7 + 2388T^8 - 1716T^9 + 960T^{10} - 388T^{11} + 105T^{12} - 16T^{13} + T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 5762], -\frac{(1 - T + T^2)^2 (1 - 6T + 9T^2 - 6T^3 + T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (1 - 16T + 105T^2 - 388T^3 + 960T^4 - 1716T^5 + 2388T^6 -$$

$$2652T^7 + 2388T^8 - 1716T^9 + 960T^{10} - 388T^{11} + 105T^{12} - 16T^{13} + T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 5837], -\frac{(1 - T + T^2)^2 (2 - 10T + 15T^2 - 10T^3 + 2T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (5 - 58T + 298T^2 - 920T^3 + 1967T^4 - 3168T^5 + 4109T^6 -$$

$$4456T^7 + 4109T^8 - 3168T^9 + 1967T^{10} - 920T^{11} + 298T^{12} - 58T^{13} + 5T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 5843], -\frac{(1 - T + T^2)^2 (1 - 4T + 3T^2 - T^3 + 3T^4 - 4T^5 + T^6)}{T^5}, \right.$$

$$-\frac{1}{T^{10}} (-1 + T)^2 (1 + T^2) (2 - 20T + 83T^2 - 192T^3 + 286T^4 - 304T^5 + 284T^6 - 272T^7 +$$

$$276T^8 - 272T^9 + 284T^{10} - 304T^{11} + 286T^{12} - 192T^{13} + 83T^{14} - 20T^{15} + 2T^{16}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 6811], -\frac{(1 - T + T^2)^2 (1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \right.$$

$$-\frac{1}{T^8} (-1 + T)^2 (1 - 8T + 34T^2 - 100T^3 + 199T^4 - 300T^5 +$$

$$377T^6 - 404T^7 + 377T^8 - 300T^9 + 199T^{10} - 100T^{11} + 34T^{12} - 8T^{13} + T^{14}), -6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 7247], -\frac{(1 - T + T^2)^2 (1 - 2T + T^2 - 2T^3 + T^4)}{T^4}, \right.$$

$$\left. -\frac{(-1 + T)^4 (1 - 4T + 12T^2 - 28T^3 + 32T^4 - 48T^5 + 44T^6 - 48T^7 + 32T^8 - 28T^9 + 12T^{10} - 4T^{11} + T^{12})}{T^8}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 7840], \frac{(1 - T + T^2) (2 - 3T + 2T^2)^2}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (18 - 106T + 334T^2 - 674T^3 + 999T^4 - 1128T^5 + 999T^6 - 674T^7 + 334T^8 - 106T^9 + 18T^{10})}{T^6}, \frac{7}{32} \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 8263], \frac{(1 - 3T + T^2)^2 (1 - T + T^2 - T^3 + T^4)}{T^4}, \right.$$

$$\frac{1}{T^8} (-1 + T)^2 (2 - 24T + 117T^2 - 306T^3 + 499T^4 - 622T^5 + 695T^6 -$$

$$720T^7 + 695T^8 - 622T^9 + 499T^{10} - 306T^{11} + 117T^{12} - 24T^{13} + 2T^{14}), -40 \left. \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 8299], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (1 - 13T^2 + 24T^3 + T^4 - 20T^5 + T^6 + 24T^7 - 13T^8 + T^{10})}{T^6}, -40 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 8852], \frac{(1 - T + T^2)^3}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (3 - 12T + 19T^2 - 4T^3 - 15T^4 + 28T^5 - 15T^6 - 4T^7 + 19T^8 - 12T^9 + 3T^{10})}{T^6}, \right.$$

$$\left. -2(-1 + 2T)(5 - 6T + 4T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 8886], \frac{(1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2 (2 + T - 32T^2 + 107T^3 - 200T^4 + 283T^5 - 312T^6 + 283T^7 - 200T^8 + 107T^9 - 32T^{10} + T^{11} + 2T^{12})}{T^7}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 8929], \frac{(1 - T + T^2)^2 (3 - 5T + 3T^2)}{T^3}, \right.$$

$$\left. - \frac{2(-1 + T)^2 (6 - 30T + 123T^2 - 326T^3 + 583T^4 - 702T^5 + 583T^6 - 326T^7 + 123T^8 - 30T^9 + 6T^{10})}{T^6}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 9012], - \frac{(1 - 3T + T^2) (1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^4}, \right.$$

$$\frac{1}{T^8} (-1 + T)^2 (5 - 52T + 246T^2 - 724T^3 + 1473T^4 - 2232T^5 + 2741T^6 -$$

$$2904T^7 + 2741T^8 - 2232T^9 + 1473T^{10} - 724T^{11} + 246T^{12} - 52T^{13} + 5T^{14}), 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 9215], - \frac{(1 - 3T + T^2) (1 - T + T^2)^2}{T^3}, \right.$$

$$\frac{2(-1 + T)^2 (1 + T - 33T^2 + 97T^3 - 130T^4 + 97T^5 - 33T^6 + T^7 + T^8)}{T^5}, 6 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 9789], - \frac{(-2 + T) (-1 + 2T) (1 - T + T^2)^3}{T^4}, \frac{1}{T^8}, \right.$$

$$(-1 + T)^2 (5 - 44T + 187T^2 - 520T^3 + 1044T^4 - 1628T^5 + 2086T^6 - 2256T^7 + 2086T^8 -$$

$$1628T^9 + 1044T^{10} - 520T^{11} + 187T^{12} - 44T^{13} + 5T^{14}), 2(-1 + 2T)(5 - 6T + 4T^2) \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 9834], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\frac{(-1 + T)^2 (1 - 12T + 51T^2 - 104T^3 + 111T^4 - 92T^5 + 111T^6 - 104T^7 + 51T^8 - 12T^9 + T^{10})}{T^6}, -10 \left. \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 10187], \frac{(1 - 3T + T^2)^2}{T^2}, \right.$$

$$\frac{2(-1 + T)^2 (-1 + 3T - 5T^2 + T^3) (-1 + 5T - 3T^2 + T^3)}{T^4}, -10 \left. \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 10280], \frac{(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^4}, \right.$$

$$\left. \frac{2(-1 + T)^4(4 - 24T + 78T^2 - 143T^3 + 178T^4 - 143T^5 + 78T^6 - 24T^7 + 4T^8)}{T^6}, 2(3 + 8T - 6T^2 + 2T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 10919], -\frac{(1 - 3T + T^2)(1 - T + T^2)^3}{T^4}, \right.$$

$$\left. -\frac{1}{T^8}(-1 + T)^2(1 - 10T + 52T^2 - 172T^3 + 379T^4 - 616T^5 + 807T^6 - 876T^7 + 807T^8 - 616T^9 + 379T^{10} - 172T^{11} + 52T^{12} - 10T^{13} + T^{14}), -2(-1 + 2T)(5 - 6T + 4T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 11336], \frac{(1 - 3T + T^2)^2(1 - T + T^2)^2}{T^4}, \right.$$

$$\left. \frac{2(-1 + T)^2(1 - T + T^2)(2 - 16T + 65T^2 - 174T^3 + 320T^4 - 396T^5 + 320T^6 - 174T^7 + 65T^8 - 16T^9 + 2T^{10})}{T^7}, \right.$$

$$\left. -20(-3 + T)(1 - T + T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 11471], \frac{(1 - T + T^2)^2(1 - 5T + 9T^2 - 5T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{(-1 + T)^2(1 - 20T + 127T^2 - 408T^3 + 787T^4 - 968T^5 + 787T^6 - 408T^7 + 127T^8 - 20T^9 + T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12404], -\frac{(1 - T + T^2)^2(1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{(-1 + T)^2(1 - 8T + 30T^2 - 64T^3 + 69T^4 - 8T^5 - 83T^6 + 128T^7 - 83T^8 - 8T^9 + 69T^{10} - 64T^{11} + 30T^{12} - 8T^{13} + T^{14})}{T^8}, \right.$$

$$\left. 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12426], \frac{(1 - T + T^2)^2(4 - 7T + 4T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2(12 - 64T + 230T^2 - 552T^3 + 931T^4 - 1102T^5 + 931T^6 - 552T^7 + 230T^8 - 64T^9 + 12T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12434], -\frac{(1 - T + T^2)^2(1 - 6T + 9T^2 - 6T^3 + T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8}(-1 + T)^2(1 - 16T + 99T^2 - 346T^3 + 814T^4 - 1406T^5 + 1918T^6 - 2116T^7 + 1918T^8 - 1406T^9 + 814T^{10} - 346T^{11} + 99T^{12} - 16T^{13} + T^{14}), -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12540], \right.$$

$$\left. -\frac{(1 - T + T^2)^2(1 - 3T + 3T^2 - 3T^3 + T^4)}{T^4}, \frac{1}{T^8}(-1 + T)^2(1 - 8T + 34T^2 - 110T^3 + 257T^4 - 446T^5 + 617T^6 - 684T^7 + 617T^8 - 446T^9 + 257T^{10} - 110T^{11} + 34T^{12} - 8T^{13} + T^{14}), 6 \right\}$$

- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12547], \frac{(1-3T+T^2)^2(2-3T+2T^2)}{T^3}, \right.$   
 $\left. - \frac{(-1+T)^2(5-46T+173T^2-350T^3+435T^4-432T^5+435T^6-350T^7+173T^8-46T^9+5T^{10})}{T^6}, 10 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 12720], \right.$   
 $\frac{(1-T+T^2)^2(1-T+T^2-T^3+T^4)}{T^4}, -\frac{1}{T^8}(-1+T)^2(2-8T+31T^2-62T^3+89T^4-$   
 $98T^5+115T^6-120T^7+115T^8-98T^9+89T^{10}-62T^{11}+31T^{12}-8T^{13}+2T^{14}), -6 \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 13873], \frac{(1-T+T^2)^2(2-3T+2T^2)}{T^3}, \right.$   
 $\left. - \frac{(-1+T)^2(5-16T+83T^2-268T^3+535T^4-664T^5+535T^6-268T^7+83T^8-16T^9+5T^{10})}{T^6}, -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 14099], -\frac{(-2+T)(-1+2T)(1-T+T^2)^2}{T^3}, \right.$   
 $\left. - \frac{(-1+T)^2(1-8T+49T^2-196T^3+423T^4-536T^5+423T^6-196T^7+49T^8-8T^9+T^{10})}{T^6}, -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 14425], \frac{(1-T+T^2)^2(3-5T+3T^2)}{T^3}, \right.$   
 $\left. - \frac{2(-1+T)^2(7-34T+129T^2-328T^3+576T^4-690T^5+576T^6-328T^7+129T^8-34T^9+7T^{10})}{T^6}, -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 15281], \frac{(1-3T+T^2)^2(3-5T+3T^2)}{T^3}, \right.$   
 $\left. \frac{2(-1+T)^2(5-69T+396T^2-1239T^3+2350T^4-2882T^5+2350T^6-1239T^7+396T^8-69T^9+5T^{10})}{T^6}, -10 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 15463], -\frac{(1-T+T^2)^2(1-3T+3T^2-3T^3+T^4)}{T^4}, \right.$   
 $\left. - \frac{(-1+T)^2(1+T^2)(1-8T+29T^2-64T^3+90T^4-84T^5+75T^6-84T^7+90T^8-64T^9+29T^{10}-8T^{11}+T^{12})}{T^8}, -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 15918], \frac{(1-T+T^2)(1-3T+3T^2-3T^3+T^4)^2}{T^5}, \right.$   
 $-\frac{1}{T^{10}}(-1+T)^2(1-12T+67T^2-240T^3+631T^4-1284T^5+2097T^6-2880T^7+3435T^8-3632T^9+3435T^{10}-$   
 $2880T^{11}+2097T^{12}-1284T^{13}+631T^{14}-240T^{15}+67T^{16}-12T^{17}+T^{18}), -2(-3+10T-15T^2+5T^3) \left. \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 16671], \frac{(1-T+T^2)^2(2-3T+3T^2-3T^3+2T^4)}{T^4}, \right.$   
 $\frac{1}{T^8}(-1+T)^2(9-44T+158T^2-370T^3+665T^4-954T^5+1185T^6-$   
 $1264T^7+1185T^8-954T^9+665T^{10}-370T^{11}+158T^{12}-44T^{13}+9T^{14}), 6 \left. \right\}$



- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 16715], \frac{(1 - T + T^2)^2 (4 - 7T + 4T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (8 - 54T + 180T^2 - 362T^3 + 535T^4 - 602T^5 + 535T^6 - 362T^7 + 180T^8 - 54T^9 + 8T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 17004], \frac{(1 - T + T^2)^2 (2 - 4T + 5T^2 - 4T^3 + 2T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8} (-1 + T)^2 (9 - 54T + 203T^2 - 498T^3 + 924T^4 - 1370T^5 + 1726T^6 - 1856T^7 + 1726T^8 - 1370T^9 + 924T^{10} - 498T^{11} + 203T^{12} - 54T^{13} + 9T^{14}), -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 17180], \frac{(1 - T + T^2)^2 (1 - 7T + 13T^2 - 7T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{2(-1 + T)^4 (1 - 15T + 70T^2 - 160T^3 + 204T^4 - 160T^5 + 70T^6 - 15T^7 + T^8)}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 17755], -\frac{(1 - T + T^2)^2 (1 - 5T + 7T^2 - 5T^3 + T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8} (-1 + T)^2 (1 - 14T + 89T^2 - 320T^3 + 744T^4 - 1256T^5 + 1676T^6 - 1832T^7 + 1676T^8 - 1256T^9 + 744T^{10} - 320T^{11} + 89T^{12} - 14T^{13} + T^{14}), -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 18414], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. -\frac{(-1 + T)^2 (1 - 10T + 33T^2 - 38T^3 - 21T^4 + 72T^5 - 21T^6 - 38T^7 + 33T^8 - 10T^9 + T^{10})}{T^6}, 10 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 18739], \frac{(1 - T + T^2)^2 (2 - 4T + 5T^2 - 4T^3 + 2T^4)}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (9 - 52T + 207T^2 - 538T^3 + 1048T^4 - 1606T^5 + 2058T^6 - 2224T^7 + 2058T^8 - 1606T^9 + 1048T^{10} - 538T^{11} + 207T^{12} - 52T^{13} + 9T^{14}), 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 19475], -\frac{(1 - T + T^2)^2 (1 - 7T + 11T^2 - 7T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (1 - 20T + 138T^2 - 508T^3 + 1243T^4 - 2200T^5 + 3037T^6 - 3364T^7 + 3037T^8 - 2200T^9 + 1243T^{10} - 508T^{11} + 138T^{12} - 20T^{13} + T^{14}), 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 19937], -\frac{(1 - T + T^2)^2 (1 - 5T + 7T^2 - 5T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (1 - 12T + 69T^2 - 254T^3 + 638T^4 - 1158T^5 + 1632T^6 - 1820T^7 + 1632T^8 - 1158T^9 + 638T^{10} - 254T^{11} + 69T^{12} - 12T^{13} + T^{14}), 6 \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 20536], \frac{(1 - T + T^2)^2 (1 - T^2 + T^4)}{T^4}, \right.$$

$$\left. \frac{(-1 + T)^2 (6 - 15 T + 14 T^2 + 11 T^3 - 34 T^4 + 51 T^5 - 52 T^6 + 51 T^7 - 34 T^8 + 11 T^9 + 14 T^{10} - 15 T^{11} + 6 T^{12})}{T^7}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 20950], \frac{(1 - 5 T + 7 T^2 - 5 T^3 + T^4)^2}{T^4}, \right.$$

$$\left. \frac{2 (-1 + T)^2 (1 - 3 T + T^2) (2 - 19 T + 88 T^2 - 247 T^3 + 452 T^4 - 550 T^5 + 452 T^6 - 247 T^7 + 88 T^8 - 19 T^9 + 2 T^{10})}{T^7}, \right.$$

$$\left. 2 (-101 + 168 T - 140 T^2 + 28 T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21019], \frac{(1 - T + T^2 - T^3 + T^4)^2}{T^4}, \right.$$

$$\left. \frac{2 (-1 + T)^2 (1 - 2 T + 2 T^2 + 8 T^3 - 19 T^4 + 34 T^5 - 38 T^6 + 34 T^7 - 19 T^8 + 8 T^9 + 2 T^{10} - 2 T^{11} + T^{12})}{T^7}, \right.$$

$$\left. -2 (7 - 11 T^2 + 11 T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21025], \frac{(1 - T + T^2)^4}{T^4}, \right.$$

$$\left. \frac{2 (-1 + T)^2 (3 - 17 T + 57 T^2 - 123 T^3 + 198 T^4 - 230 T^5 + 198 T^6 - 123 T^7 + 57 T^8 - 17 T^9 + 3 T^{10})}{T^6}, \right.$$

$$\left. -2 (-13 + 34 T - 44 T^2 + 30 T^3 - 12 T^4 + 2 T^5) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21124], -\frac{(-2 + T) (-1 + 2 T) (1 - T + T^2)^3}{T^4}, \frac{1}{T^8} (-1 + T)^2 (1 - T + T^2) \right.$$

$$\left. (3 - 25 T + 83 T^2 - 138 T^3 + 97 T^4 + 29 T^5 - 94 T^6 + 29 T^7 + 97 T^8 - 138 T^9 + 83 T^{10} - 25 T^{11} + 3 T^{12}), 12 \right.$$

$$\left. (-1 + T) (1 - T + T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21130], -\frac{(-2 + T) (-1 + 2 T) (1 - T + T^2)^3}{T^4}, \frac{1}{T^8} (-1 + T)^2 (1 - T + T^2) \right.$$

$$\left. (3 - 25 T + 83 T^2 - 138 T^3 + 97 T^4 + 29 T^5 - 94 T^6 + 29 T^7 + 97 T^8 - 138 T^9 + 83 T^{10} - 25 T^{11} + 3 T^{12}), 12 \right.$$

$$\left. (-1 + T) (1 - T + T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21354], \frac{(1 - T + T^2)^2 (4 - 7 T + 4 T^2)}{T^3}, \right.$$

$$\left. \frac{2 (-1 + T)^2 (8 - 50 T + 154 T^2 - 296 T^3 + 425 T^4 - 474 T^5 + 425 T^6 - 296 T^7 + 154 T^8 - 50 T^9 + 8 T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21473], \frac{(1 - 3 T + T^2)^2 (2 - 3 T + 2 T^2)}{T^3}, \right.$$

$$\left. \frac{(-1 + T)^2 (5 - 70 T + 403 T^2 - 1242 T^3 + 2303 T^4 - 2804 T^5 + 2303 T^6 - 1242 T^7 + 403 T^8 - 70 T^9 + 5 T^{10})}{T^6}, 10 \right\}$$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 21533], \frac{(1 - 3T + 5T^2 - 3T^3 + T^4)^2}{T^4}, \right.$$

$$\left. - \frac{2(-1 + T)^2(2 - 20T + 82T^2 - 202T^3 + 339T^4 - 400T^5 + 339T^6 - 202T^7 + 82T^8 - 20T^9 + 2T^{10})}{T^6}, \right.$$

$$\left. -2(-12 + 20T - 15T^2 + 5T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 22278], \frac{(1 - 3T + T^2)^2(1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2(1 - 10T + 29T^2 - 30T^3 - 19T^4 + 52T^5 - 19T^6 - 30T^7 + 29T^8 - 10T^9 + T^{10})}{T^6}, 40 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 22324], \frac{(1 - T + T^2)^3(2 - 3T + 2T^2)}{T^4}, \frac{1}{T^8}, \right.$$

$$\left. (-1 + T)^2(9 - 62T + 271T^2 - 766T^3 + 1588T^4 - 2558T^5 + 3366T^6 - 3676T^7 + 3366T^8 - \right.$$

$$\left. 2558T^9 + 1588T^{10} - 766T^{11} + 271T^{12} - 62T^{13} + 9T^{14}), 2(-11 + 28T - 28T^2 + 14T^3) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23273], -\frac{(1 - T + T^2)^2(2 - 6T + 7T^2 - 6T^3 + 2T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8}(-1 + T)^2(5 - 40T + 168T^2 - 462T^3 + 893T^4 - 1338T^5 + 1659T^6 - \right.$$

$$\left. 1772T^7 + 1659T^8 - 1338T^9 + 893T^{10} - 462T^{11} + 168T^{12} - 40T^{13} + 5T^{14}), -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23509], \frac{(1 - 3T + T^2)^2(1 - T + T^2)}{T^3}, \right.$$

$$\left. - \frac{(-1 + T)^2(1 - 16T + 75T^2 - 192T^3 + 313T^4 - 356T^5 + 313T^6 - 192T^7 + 75T^8 - 16T^9 + T^{10})}{T^6}, 40 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23566], \frac{(2 - 3T + 2T^2)^2}{T^2}, \right.$$

$$\left. - \frac{2(-1 + T)^2(1 - 4T + 9T^2 - 21T^3 + 43T^4 - 74T^5 + 88T^6 - 74T^7 + 43T^8 - 21T^9 + 9T^{10} - 4T^{11} + T^{12})}{T^7}, \frac{21}{64} \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23680], \frac{(1 - 3T + T^2)^2(1 - T + T^2)^2}{T^4}, \right.$$

$$\left. - \frac{2(-1 + T)^2(1 - T + T^2)(1 - 11T + 57T^2 - 172T^3 + 330T^4 - 408T^5 + 330T^6 - 172T^7 + 57T^8 - 11T^9 + T^{10})}{T^7}, \right.$$

$$\left. 20(-3 + T)(1 - T + T^2) \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23688], \frac{(1 - 3T + T^2)^2}{T^2}, \right.$$

$$\left. - \frac{2(-1 + T)^2(2 - 11T + 28T^2 - 51T^3 + 66T^4 - 51T^5 + 28T^6 - 11T^7 + 2T^8)}{T^5}, -10 \right\}$$

- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23692], \frac{(1-3T+T^2)^2(1-T+T^2)^2}{T^4}, \right.$   
 $\left. \frac{2(-1+T)^4(1-T+T^2)(2-12T+37T^2-75T^3+98T^4-75T^5+37T^6-12T^7+2T^8)}{T^7}, -20(-3+T)(1-T+T^2) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 23768], \frac{(1-3T+T^2)^2(2-3T+2T^2)}{T^3}, \right.$   
 $\left. \frac{(-1+T)^2(5-68T+381T^2-1160T^3+2151T^4-2620T^5+2151T^6-1160T^7+381T^8-68T^9+5T^{10})}{T^6}, -10 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 24208], \frac{(1-T+T^2)^3}{T^3}, \right.$   
 $\left. -\frac{(-1+T)^2(2-5T-2T^2+23T^3-46T^4+69T^5-76T^6+69T^7-46T^8+23T^9-2T^{10}-5T^{11}+2T^{12})}{T^7}, \right.$   
 $\left. -2(-1+2T)(5-6T+4T^2) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 24221], -\frac{(1-T+T^2)^2(1-5T+7T^2-5T^3+T^4)}{T^4}, \right.$   
 $\left. -\frac{1}{T^8}(-1+T)^2(1-12T+59T^2-158T^3+266T^4-314T^5+ \right.$   
 $\left. 302T^6-284T^7+302T^8-314T^9+266T^{10}-158T^{11}+59T^{12}-12T^{13}+T^{14}), -6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 25154], \frac{(1-T+T^2)^2(3-7T+9T^2-7T^3+3T^4)}{T^4}, \right.$   
 $\left. \frac{1}{T^8}(-1+T)^2(21-140T+559T^2-1486T^3+2960T^4-4654T^5+6038T^6- \right.$   
 $\left. 6564T^7+6038T^8-4654T^9+2960T^{10}-1486T^{11}+559T^{12}-140T^{13}+21T^{14}), 6 \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 25413], \frac{(1-3T+T^2)^2(1-T+T^2)^2}{T^4}, \right.$   
 $\left. \frac{2(-1+T)^2(2-22T+112T^2-326T^3+599T^4-728T^5+599T^6-326T^7+112T^8-22T^9+2T^{10})}{T^6}, \right.$   
 $\left. -6(-7+8T-8T^2+2T^3) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 25573], \frac{(1-T+T^2)^3(3-5T+3T^2)}{T^4}, \frac{1}{T^8}, \right.$   
 $\left. (-1+T)^2(21-152T+638T^2-1778T^3+3681T^4-5970T^5+7893T^6-8640T^7+7893T^8- \right.$   
 $\left. 5970T^9+3681T^{10}-1778T^{11}+638T^{12}-152T^{13}+21T^{14}), 2(-11+28T-28T^2+14T^3) \right\}$
- $\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 25657], -\frac{(-2+T)(-1+2T)(1-3T+T^2)^2}{T^3}, \right.$   
 $\left. \frac{(-1+T)^2(1-24T+203T^2-860T^3+2007T^4-2660T^5+2007T^6-860T^7+203T^8-24T^9+T^{10})}{T^6}, -10 \right\}$

- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 26101], \frac{(1 - T + T^2)^2 (3 - 5T + 3T^2)}{T^3}, \right.$$

$$\left. \frac{2(-1 + T)^2 (6 - 32T + 82T^2 - 124T^3 + 145T^4 - 146T^5 + 145T^6 - 124T^7 + 82T^8 - 32T^9 + 6T^{10})}{T^6}, 6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 26368], -\frac{(1 - T + T^2)^2 (2 - 4T + 3T^2 - 4T^3 + 2T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8} (-1 + T)^2 (5 - 30T + 103T^2 - 248T^3 + 418T^4 - 560T^5 + 642T^6 - 668T^7 + 642T^8 - 560T^9 + 418T^{10} - 248T^{11} + 103T^{12} - 30T^{13} + 5T^{14}), -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 26867], -\frac{(1 - 3T + T^2) (1 - T + T^2)^2 (2 - 3T + 2T^2)}{T^4}, \right.$$

$$\left. \frac{1}{T^8} (-1 + T)^2 (5 - 54T + 262T^2 - 766T^3 + 1515T^4 - 2226T^5 + 2683T^6 - 2828T^7 + 2683T^8 - 2226T^9 + 1515T^{10} - 766T^{11} + 262T^{12} - 54T^{13} + 5T^{14}), 24 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 26894], \frac{(1 - T + T^2)^2 (1 - 9T + 17T^2 - 9T^3 + T^4)}{T^4}, \right.$$

$$\left. \frac{(-1 + T)^2 (7 - 44T + 71T^2 + 64T^3 - 355T^4 + 516T^5 - 355T^6 + 64T^7 + 71T^8 - 44T^9 + 7T^{10})}{T^6}, -6 \right\}$$
- $$\gg \left\{ \text{Knot}[14, \text{NonAlternating}, 27030], -\frac{(1 - T + T^2)^2 (2 - 8T + 11T^2 - 8T^3 + 2T^4)}{T^4}, \right.$$

$$\left. -\frac{1}{T^8} (-1 + T)^2 (5 - 50T + 243T^2 - 778T^3 + 1788T^4 - 3114T^5 + 4290T^6 - 4760T^7 + 4290T^8 - 3114T^9 + 1788T^{10} - 778T^{11} + 243T^{12} - 50T^{13} + 5T^{14}), -6 \right\}$$

Out[ ]:=

$$\left\{ \left\{ \text{Knot}[11, \text{NonAlternating}, 66], \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right. \right.$$

$$\left. -\frac{(-1 + T)^2 (1 - 12T + 59T^2 - 156T^3 + 251T^4 - 292T^5 + 251T^6 - 156T^7 + 59T^8 - 12T^9 + T^{10})}{T^6}, 10 \right\},$$

$$\left\{ \text{Knot}[12, \text{Alternating}, 169], \frac{(2 - 3T + 2T^2)^2}{T^2}, \frac{2(-1 + T)^2 (7 - 28T + 68T^2 - 88T^3 + 68T^4 - 28T^5 + 7T^6)}{T^4}, \frac{7}{8} \right\},$$

$$\dots 178 \dots, \left\{ \text{Knot}[14, \text{NonAlternating}, 27030], -\frac{(1 - T + T^2)^2 (2 - 8T + 11T^2 - 8T^3 + 2T^4)}{T^4}, \right.$$

$$\left. -\frac{(-1 + T)^2 (5 - 50T + 243T^2 - 778T^3 + 1788T^4 - 3114T^5 + 4290T^6 - 4760T^7 + 4290T^8 - 3114T^9 + 1788T^{10} - 778T^{11} + 243T^{12} - 50T^{13} + 5T^{14})}{T^8}, -6 \right\} \right\}$$

Full expression not available (original memory size: 0.6 MB) ⚙

In[ ]:=  $\rho@$ "K11n66"  
 Out[ ]:=

$$\left\{ \frac{(1 - 3T + T^2)^2 (1 - T + T^2)}{T^3}, \right.$$

$$\left. -\frac{(-1 + T)^2 (1 - 12T + 59T^2 - 156T^3 + 251T^4 - 292T^5 + 251T^6 - 156T^7 + 59T^8 - 12T^9 + T^{10})}{T^6} \right\}$$



$$\left\{ \frac{(-2 + T)(-1 + 2T)(1 - 3T + T^2)(1 - T + T^2)}{T^3}, \right. \\ \left. - \frac{(-1 + T)^2(1 - 3T + T^2)(5 - 37T + 106T^2 - 169T^3 + 194T^4 - 169T^5 + 106T^6 - 37T^7 + 5T^8)}{T^6} \right\},$$

$$\text{Knot [11, Alternating, 58]} \rightarrow \left\{ -\frac{(-2 + T)(-1 + 2T)(1 - T + T^2)^2}{T^3}, \right. \\ \left. \frac{(-1 + T)^2(1 - T + T^2)(1 - 7T + 19T^2 - 26T^3 + 20T^4 - 26T^5 + 19T^6 - 7T^7 + T^8)}{T^6} \right\},$$

$$\text{Knot [11, Alternating, 103]} \rightarrow \left\{ \frac{(-2 + T)^2(-1 + 2T)^2}{T^2}, \right. \\ \left. - \frac{4(-2 + T)(-1 + T)^4(-1 + 2T)(1 - 4T + T^2)}{T^4} \right\},$$

$$\text{Knot [11, Alternating, 132]} \rightarrow \left\{ \frac{(-2 + T)(-1 + 2T)(1 - 3T + T^2)(1 - T + T^2)}{T^3}, \right. \\ \left. - \frac{(-1 + T)^4(1 - 3T + T^2)(5 - 27T + 45T^2 - 44T^3 + 45T^4 - 27T^5 + 5T^6)}{T^6} \right\},$$

$$\text{Knot [11, Alternating, 157]} \rightarrow \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^3}{T^4}, \right. \\ \left. \frac{(-1 + T)^2(1 - 3T + T^2)(1 - T + T^2)^2(1 - 5T + 11T^2 - 18T^3 + 12T^4 - 18T^5 + 11T^6 - 5T^7 + T^8)}{T^8} \right\},$$

$$\text{Knot [11, Alternating, 165]} \rightarrow \left\{ -\frac{(-2 + T)(-1 + 2T)(1 - T + T^2)^2}{T^3}, \right. \\ \left. - \frac{(-1 + T)^2(1 - T + T^2)(1 - 7T + 19T^2 - 50T^3 + 80T^4 - 50T^5 + 19T^6 - 7T^7 + T^8)}{T^6} \right\}, \text{Knot [11,}$$

$$\text{Alternating, 201]} \rightarrow \left\{ \frac{(-2 + T)^2(-1 + 2T)^2}{T^2}, -\frac{4(-2 + T)(-1 + T)^2(-1 + 2T)(1 - 4T + T^2)}{T^3} \right\},$$

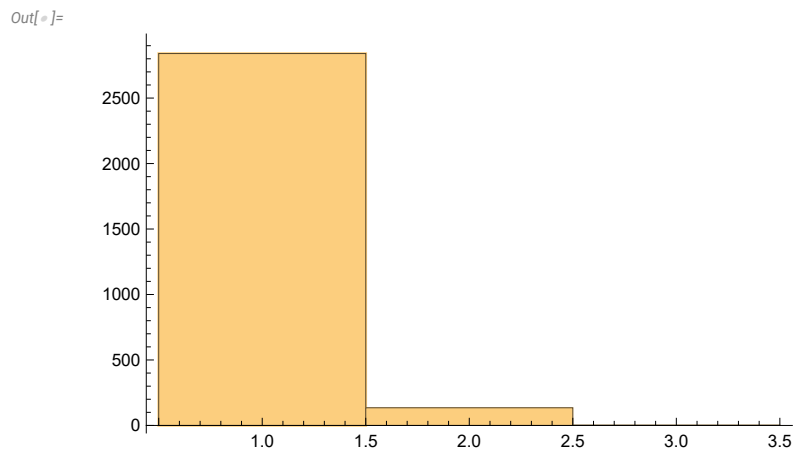
$$\text{Knot [11, Alternating, 264]} \rightarrow \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^3}{T^4}, \right. \\ \left. - \frac{(-1 + T)^2(1 - T + T^2)^2(1 - 8T + 27T^2 - 58T^3 + 81T^4 - 80T^5 + 81T^6 - 58T^7 + 27T^8 - 8T^9 + T^{10})}{T^8} \right\},$$

$$\text{Knot [11, Alternating, 305]} \rightarrow \left\{ -\frac{(1 - 3T + T^2)(1 - T + T^2)^3}{T^4}, \right. \\ \left. \frac{(-1 + T)^2(1 - 3T + T^2)^2(1 - T + T^2)^2(1 - 2T + 2T^2 + 2T^4 - 2T^5 + T^6)}{T^8} \right\},$$





```
In[ ]:= FactorCountJ /@ AllKnots[{3, 12}] // Histogram
```



```
In[ ]:= Table[{FactorCount[K], BridgeIndex[K]}, {K, AllKnots[{3, 10}]}] // Tally
```

Out[ ]:=

```
{{{1, 2}, 77}, {{2, 2}, 15}, {{2, 3}, 45},
  {{3, 3}, 17}, {{3, 2}, 3}, {{1, 3}, 89}, {{4, 3}, 3}}
```

```
In[ ]:= Table[{FactorCount[K], BridgeIndex[K]}, {K, AllKnots[{3, 10}]}] // Histogram3D
```

