Pensieve header: A list of all repeats of MVA values for links with up to 11 crossings.

In[•]:=
```
<< KnotTheory`
```

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

In[•]:=
```
? MultivariableAlexander
```

Out[•]=

Symbol

MultivariableAlexander[L][t] returns the multivariable Alexander polynomial of a link L as a function of the variable t[1], t[2], ..., t[c], where c is the number of components of L. MultivariableAlexander[L, Program –> prog][t] uses the program prog to perform the computation. The currently available programs are "MVA1", written by Dan Carney in Toronto in the summer of 2005, and the faster "MVA2" (default), written by Jana Archibald in Toronto in 2008–9.

In[•]:=
```
MVA[L_] := (MultivariableAlexander[L][t] /. t[i_] :> t_i)
```

In[•]:=
```
Select[SplitBy[SortBy[Table[L → MVA[L], {L, AllLinks[]}], Last], Last], Length[#] > 1 &]
```

Out[•]=

$$\Big\{\{\text{Link}[9, \text{NonAlternating}, 27] \to 0, \text{Link}[10, \text{NonAlternating}, 32] \to 0,$$
$$\text{Link}[10, \text{NonAlternating}, 36] \to 0, \text{Link}[10, \text{NonAlternating}, 107] \to 0,$$
$$\text{Link}[11, \text{NonAlternating}, 244] \to 0, \text{Link}[11, \text{NonAlternating}, 247] \to 0,$$
$$\text{Link}[11, \text{NonAlternating}, 334] \to 0, \text{Link}[11, \text{NonAlternating}, 381] \to 0,$$
$$\text{Link}[11, \text{NonAlternating}, 396] \to 0, \text{Link}[11, \text{NonAlternating}, 404] \to 0,$$
$$\text{Link}[11, \text{NonAlternating}, 406] \to 0\}, \Big\{\text{Link}[11, \text{Alternating}, 18] \to -\frac{(-1+t_1)\ (-1+t_2)^5}{\sqrt{t_1}\ t_2^{5/2}},$$
$$\text{Link}[11, \text{Alternating}, 40] \to -\frac{(-1+t_1)\ (-1+t_2)^5}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$
$$\Big\{\text{Link}[11, \text{Alternating}, 20] \to \frac{(-1+t_1)\ (-1+t_2)^5}{\sqrt{t_1}\ t_2^{5/2}},$$
$$\text{Link}[11, \text{Alternating}, 38] \to \frac{(-1+t_1)\ (-1+t_2)^5}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$
$$\Big\{\text{Link}[10, \text{Alternating}, 19] \to -\frac{2\ (-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\text{Link}[11, \text{NonAlternating}, 113] \to -\frac{2\ (-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\left\{\text{Link}[8, \text{Alternating}, 4] \to -\frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[10, \text{NonAlternating}, 11] \to -\frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[10, \text{NonAlternating}, 22] \to -\frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[11, \text{NonAlternating}, 8] \to -\frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[11, \text{NonAlternating}, 53] \to -\frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[8, \text{Alternating}, 2] \to \frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[10, \text{NonAlternating}, 2] \to \frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[10, \text{NonAlternating}, 21] \to \frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[11, \text{NonAlternating}, 5] \to \frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[11, \text{NonAlternating}, 52] \to \frac{(-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 10] \to \frac{2\ (-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}, \text{Link}[11, \text{NonAlternating}, 92] \to \frac{2\ (-1+t_1)\ (-1+t_2)^3}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 18] \to -\frac{3\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[10, \text{NonAlternating}, 34] \to -\frac{3\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}\right\},$$

$$\left\{\text{Link}[7, \text{Alternating}, 4] \to -\frac{2\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[10, \text{NonAlternating}, 8] \to -\frac{2\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[11, \text{NonAlternating}, 112] \to -\frac{2\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}\right\},$$

$$\left\{\text{Link}[5, \text{Alternating}, 1] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[7, \text{NonAlternating}, 2] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[9, \text{NonAlternating}, 3] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[10, \text{NonAlternating}, 9] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}, \text{Link}[10, \text{NonAlternating}, 14] \to$$

$$\frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},\ \text{Link}[10,\ \text{NonAlternating},\ 18] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 15] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},\ \text{Link}[11,\ \text{NonAlternating},\ 33] \to$$

$$\frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},\ \text{Link}[11,\ \text{NonAlternating},\ 39] \to \frac{(-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}\Big\},$$

$$\Big\{\text{Link}[9,\ \text{NonAlternating},\ 2] \to \frac{2\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 30] \to \frac{2\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}\Big\},$$

$$\Big\{\text{Link}[11,\ \text{NonAlternating},\ 14] \to \frac{3\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 27] \to \frac{3\ (-1+t_1)\ (-1+t_2)}{\sqrt{t_1}\ \sqrt{t_2}}\Big\},$$

$$\Big\{\text{Link}[10,\ \text{NonAlternating},\ 56] \to \frac{(-1+t_1)\ (1+t_1)^2\ (-1+t_2)}{t_1^{3/2}\ \sqrt{t_2}},$$

$$\text{Link}[10,\ \text{NonAlternating},\ 57] \to \frac{(-1+t_1)\ (1+t_1)^2\ (-1+t_2)}{t_1^{3/2}\ \sqrt{t_2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 226] \to \frac{(-1+t_1)\ (1+t_1)^2\ (-1+t_2)}{t_1^{3/2}\ \sqrt{t_2}}\Big\},$$

$$\Big\{\text{Link}[10,\ \text{Alternating},\ 3] \to -\frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[10,\ \text{Alternating},\ 7] \to -\frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[10,\ \text{Alternating},\ 36] \to -\frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 25] \to -\frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 35] \to -\frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[10,\ \text{Alternating},\ 32] \to \frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[10,\ \text{Alternating},\ 34] \to \frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11,\ \text{NonAlternating},\ 118] \to \frac{(-1+t_1)\ (-2+t_2)\ (-1+t_2)\ (-1+2\,t_2)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 38] \to -\frac{(-1+t_1)\ (-1+t_2)\ (1+t_1 t_2)^2}{t_1^{3/2} t_2^{3/2}},\right.$$
$$\left.\text{Link}[11, \text{NonAlternating}, 206] \to -\frac{(-1+t_1)\ (-1+t_2)\ (1+t_1 t_2)^2}{t_1^{3/2} t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{NonAlternating}, 13] \to -\frac{(1-t_1+t_1 t_2)\ (1-t_2+t_1 t_2)}{t_1 t_2},\right.$$
$$\left.\text{Link}[11, \text{NonAlternating}, 138] \to -\frac{(1-t_1+t_1 t_2)\ (1-t_2+t_1 t_2)}{t_1 t_2}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 41] \to -\frac{(1+t_1 t_2)\ (1-t_1+t_1 t_2)\ (1-t_2+t_1 t_2)}{t_1^{3/2} t_2^{3/2}},\right.$$
$$\left.\text{Link}[11, \text{NonAlternating}, 209] \to -\frac{(1+t_1 t_2)\ (1-t_1+t_1 t_2)\ (1-t_2+t_1 t_2)}{t_1^{3/2} t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[7, \text{Alternating}, 5] \to \frac{(-1+t_1+t_2)\ (-t_1-t_2+t_1 t_2)}{t_1 t_2},\right.$$
$$\left.\text{Link}[10, \text{NonAlternating}, 44] \to \frac{(-1+t_1+t_2)\ (-t_1-t_2+t_1 t_2)}{t_1 t_2}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 18] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$
$$\left.\text{Link}[11, \text{NonAlternating}, 105] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[7, \text{Alternating}, 3] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$
$$\text{Link}[10, \text{NonAlternating}, 5] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\text{Link}[10, \text{NonAlternating}, 24] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\left.\text{Link}[11, \text{NonAlternating}, 94] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{NonAlternating}, 5] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$
$$\text{Link}[11, \text{NonAlternating}, 48] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\left.\text{Link}[11, \text{NonAlternating}, 91] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[10, \text{NonAlternating}, 33] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$
$$\left.\text{Link}[11, \text{NonAlternating}, 2] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 8] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$
$$\text{Link}[11, \text{NonAlternating}, 23] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\left.\text{Link}[11, \text{NonAlternating}, 50] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 28] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$
$$\left.\text{Link}[11, \text{Alternating}, 49] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 41] \to \frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$
$$\left.\text{Link}[11, \text{Alternating}, 46] \to \frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[8, \text{Alternating}, 1] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$
$$\text{Link}[10, \text{NonAlternating}, 12] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\text{Link}[10, \text{NonAlternating}, 20] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\text{Link}[11, \text{NonAlternating}, 3] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$
$$\left.\text{Link}[11, \text{NonAlternating}, 6] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 20] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$
$$\left.\text{Link}[10, \text{Alternating}, 21] \to -\frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 14] \to \frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\text{Link}[10, \text{Alternating}, 22] \to \frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 88] \to \frac{(-1+t_1)\ (-1+t_2)^3\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 114] \to -\frac{4\ (-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$

$$\left.\text{Link}[11, \text{Alternating}, 126] \to -\frac{4\ (-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 4] \to -\frac{2\ (-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$

$$\left.\text{Link}[10, \text{NonAlternating}, 35] \to -\frac{2\ (-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[7, \text{Alternating}, 1] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},\right.$$

$$\text{Link}[9, \text{NonAlternating}, 6] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[9, \text{NonAlternating}, 8] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[10, \text{NonAlternating}, 3] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[10, \text{NonAlternating}, 6] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 9] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 12] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 24] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 28] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 10] \to \frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},\right.$$

$$\text{Link}[11, \text{NonAlternating}, 17] \to \frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 78] \to \frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 83] \to \frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 112] \to -\frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\left.\text{Link}[11, \text{Alternating}, 130] \to -\frac{2\,(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 9] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\text{Link}[11, \text{NonAlternating}, 80] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 81] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 57] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-3\,t_2+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\left.\text{Link}[11, \text{Alternating}, 95] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-3\,t_2+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 63] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(1-3\,t_2+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\left.\text{Link}[11, \text{Alternating}, 77] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(1-3\,t_2+t_2^2\right)\,\left(1-t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 29] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)^2}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\left.\text{Link}[10, \text{Alternating}, 39] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)^2}{\sqrt{t_1}\,t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 14] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)\,\left(1+t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}},\right.$$

$$\text{Link}[10, \text{NonAlternating}, 39] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)\,\left(1+t_2+t_2^2\right)}{\sqrt{t_1}\,t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 94] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-7\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 96] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-7\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[10, \text{Alternating}, 41] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 93] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 124] \to -\frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[9, \text{Alternating}, 1] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[9, \text{Alternating}, 3] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[10, \text{Alternating}, 31] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[10, \text{NonAlternating}, 16] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 18] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 21] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 31] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 37] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 43] \to \frac{(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 50] \to \frac{2\,(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\,t_2^{3/2}},$$

$$\text{Link}[11,\text{Alternating},54]\to\frac{2\,(-1+t_1)\,(-1+t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},167]\to\frac{(1-t_1+t_1\,t_2)\,(1-t_2+t_1\,t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{t_1\,t_2^2},$$

$$\text{Link}[11,\text{Alternating},209]\to\frac{(1-t_1+t_1\,t_2)\,(1-t_2+t_1\,t_2)\,\left(2-3\,t_2+2\,t_2^2\right)}{t_1\,t_2^2}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},47]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},53]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(1+t_2^2\right)\,\left(2-3\,t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[9,\text{Alternating},15]\to-\frac{(-1+t_1)\,(-1+t_2)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[9,\text{Alternating},17]\to-\frac{(-1+t_1)\,(-1+t_2)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},119]\to-\frac{(-1+t_1)\,(-1+t_2)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{NonAlternating},11]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},20]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},101]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},102]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(1-t_2+t_2^2\right)\,\left(2-t_2+2\,t_2^2\right)}{\sqrt{t_1}\;t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},5]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(3-5\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[11,\text{Alternating},15]\to\frac{(-1+t_1)\,(-1+t_2)\,\left(3-5\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[10,\text{Alternating},17]\to-\frac{(-1+t_1)\,(-1+t_2)\,\left(3-4\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[11,\text{Alternating},22]\to-\frac{(-1+t_1)\,(-1+t_2)\,\left(3-4\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\;t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 107] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(3-4\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 117] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(3-2\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 131] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(3-2\,t_2+3\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 9] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(4-7\,t_2+4\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 10] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(4-7\,t_2+4\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 65] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(4-5\,t_2+4\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 68] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(4-5\,t_2+4\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 83] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(4-5\,t_2+4\,t_2^2\right)}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\Big\{\text{Link}[9, \text{Alternating}, 21] \to \frac{\left(-1+t_1+t_2-t_1\,t_2+t_1\,t_2^2\right)\ \left(-1+t_2-t_1\,t_2-t_2^2+t_1\,t_2^2\right)}{t_1\,t_2^2},$$

$$\text{Link}[11, \text{NonAlternating}, 178] \to \frac{\left(-1+t_1+t_2-t_1\,t_2+t_1\,t_2^2\right)\ \left(-1+t_2-t_1\,t_2-t_2^2+t_1\,t_2^2\right)}{t_1\,t_2^2},$$

$$\text{Link}[11, \text{NonAlternating}, 186] \to \frac{\left(-1+t_1+t_2-t_1\,t_2+t_1\,t_2^2\right)\ \left(-1+t_2-t_1\,t_2-t_2^2+t_1\,t_2^2\right)}{t_1\,t_2^2}\Big\},$$

$$\Big\{\text{Link}[11, \text{NonAlternating}, 140] \to \frac{1-3\,t_1-t_2+5\,t_1\,t_2-t_1^2\,t_2-3\,t_1\,t_2^2+t_1^2\,t_2^2}{t_1\,t_2},$$

$$\text{Link}[11, \text{NonAlternating}, 150] \to \frac{1-3\,t_1-t_2+5\,t_1\,t_2-t_1^2\,t_2-3\,t_1\,t_2^2+t_1^2\,t_2^2}{t_1\,t_2}\Big\},$$

$$\Big\{\text{Link}[11, \text{NonAlternating}, 161] \to -\frac{2-2\,t_1+t_1^2-3\,t_2+5\,t_1\,t_2-3\,t_1^2\,t_2+t_2^2-2\,t_1\,t_2^2+2\,t_1^2\,t_2^2}{t_1\,t_2},$$

$$\text{Link}[11, \text{NonAlternating}, 185] \to -\frac{2-2\,t_1+t_1^2-3\,t_2+5\,t_1\,t_2-3\,t_1^2\,t_2+t_2^2-2\,t_1\,t_2^2+2\,t_1^2\,t_2^2}{t_1\,t_2}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 129] \to \frac{2-3\,t_1-6\,t_2+6\,t_1\,t_2+6\,t_2^2-6\,t_1\,t_2^2-3\,t_2^3+2\,t_1\,t_2^3}{\sqrt{t_1}\ t_2^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 55] \to \frac{2-3\,t_1-6\,t_2+6\,t_1\,t_2+6\,t_2^2-6\,t_1\,t_2^2-3\,t_2^3+2\,t_1\,t_2^3}{\sqrt{t_1}\ t_2^{3/2}}\Big\},$$

$$\left\{\text{Link}[9,\text{Alternating},19]\to-\frac{2-2\,t_1-5\,t_2+6\,t_1\,t_2+6\,t_2^2-5\,t_1\,t_2^2-2\,t_2^3+2\,t_1\,t_2^3}{\sqrt{t_1}\;t_2^{3/2}},\right.$$

$$\left.\text{Link}[11,\text{NonAlternating},72]\to-\frac{2-2\,t_1-5\,t_2+6\,t_1\,t_2+6\,t_2^2-5\,t_1\,t_2^2-2\,t_2^3+2\,t_1\,t_2^3}{\sqrt{t_1}\;t_2^{3/2}}\right\},$$

$$\left\{\text{Link}[11,\text{Alternating},1]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+7\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},\right.$$

$$\text{Link}[11,\text{Alternating},3]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+7\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},12]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+7\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\left.\text{Link}[11,\text{Alternating},13]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+7\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11,\text{Alternating},2]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+9\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},\right.$$

$$\text{Link}[11,\text{Alternating},8]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+9\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\left.\text{Link}[11,\text{Alternating},11]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-5\,t_2+9\,t_2^2-5\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11,\text{Alternating},66]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+3\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},\right.$$

$$\text{Link}[11,\text{Alternating},90]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+3\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},$$

$$\left.\text{Link}[11,\text{Alternating},93]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+3\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11,\text{Alternating},19]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+4\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},\right.$$

$$\left.\text{Link}[11,\text{Alternating},42]\to\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+4\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11,\text{Alternating},55]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+7\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}},\right.$$

$$\left.\text{Link}[11,\text{Alternating},78]\to-\frac{(-1+t_1)\;(-1+t_2)\;\left(1-4\,t_2+7\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\;t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 69] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+7\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\left.\text{Link}[11, \text{Alternating}, 91] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-4\,t_2+7\,t_2^2-4\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 2] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+3\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\text{Link}[10, \text{Alternating}, 4] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+3\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[10, \text{Alternating}, 5] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+3\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 34] \to -\frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+3\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 1] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+5\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\left.\text{Link}[10, \text{Alternating}, 6] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-3\,t_2+5\,t_2^2-3\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[10, \text{Alternating}, 27] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-2\,t_2+t_2^2-2\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\left.\text{Link}[11, \text{NonAlternating}, 114] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-2\,t_2+t_2^2-2\,t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[9, \text{Alternating}, 2] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2-t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\text{Link}[10, \text{NonAlternating}, 15] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2-t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 41] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2-t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 46] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2-t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\left.\text{Link}[11, \text{NonAlternating}, 49] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(1-t_2+t_2^2-t_2^3+t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\right\},$$

$$\left\{\text{Link}[11, \text{Alternating}, 4] \to \frac{(-1+t_1)\ (-1+t_2)\ \left(2-4\,t_2+5\,t_2^2-4\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},\right.$$

$$\text{Link}[11,\text{Alternating},6]\to\frac{(-1+t_1)\ (-1+t_2)\ \left(2-4\,t_2+5\,t_2^2-4\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},14]\to\frac{(-1+t_1)\ (-1+t_2)\ \left(2-4\,t_2+5\,t_2^2-4\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},7]\to\frac{(-1+t_1)\ (-1+t_2)\ \left(2-3\,t_2+3\,t_2^2-3\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},17]\to\frac{(-1+t_1)\ (-1+t_2)\ \left(2-3\,t_2+3\,t_2^2-3\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},56]\to-\frac{(-1+t_1)\ (-1+t_2)\ \left(2-2\,t_2+3\,t_2^2-2\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},64]\to-\frac{(-1+t_1)\ (-1+t_2)\ \left(2-2\,t_2+3\,t_2^2-2\,t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},111]\to-\frac{(-1+t_1)\ (-1+t_2)\ \left(2-t_2+2\,t_2^2-t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11,\text{Alternating},125]\to-\frac{(-1+t_1)\ (-1+t_2)\ \left(2-t_2+2\,t_2^2-t_2^3+2\,t_2^4\right)}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},195]\to\frac{1}{t_1\,t_2^2}\left(1-3\,t_1+2\,t_1^2-3\,t_2+8\,t_1\,t_2-4\,t_1^2\,t_2+4\,t_2^2-9\,t_1\,t_2^2+4\,t_1^2\,t_2^2-4\,t_2^3+8\,t_1\,t_2^3-3\,t_1^2\,t_2^3+2\,t_2^4-3\,t_1\,t_2^4+t_1^2\,t_2^4\right),\ \text{Link}[11,\text{Alternating},234]\to\frac{1}{t_1\,t_2^2}\left(1-3\,t_1+2\,t_1^2-3\,t_2+8\,t_1\,t_2-4\,t_1^2\,t_2+4\,t_2^2-9\,t_1\,t_2^2+4\,t_1^2\,t_2^2-4\,t_2^3+8\,t_1\,t_2^3-3\,t_1^2\,t_2^3+2\,t_2^4-3\,t_1\,t_2^4+t_1^2\,t_2^4\right)\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},182]\to\frac{1}{t_1\,t_2^2}\left(2-3\,t_1+t_1^2-5\,t_2+9\,t_1\,t_2-4\,t_1^2\,t_2+6\,t_2^2-11\,t_1\,t_2^2+6\,t_1^2\,t_2^2-4\,t_2^3+9\,t_1\,t_2^3-5\,t_1^2\,t_2^3+t_2^4-3\,t_1\,t_2^4+2\,t_1^2\,t_2^4\right),\ \text{Link}[11,\text{Alternating},210]\to\frac{1}{t_1\,t_2^2}\left(2-3\,t_1+t_1^2-5\,t_2+9\,t_1\,t_2-4\,t_1^2\,t_2+6\,t_2^2-11\,t_1\,t_2^2+6\,t_1^2\,t_2^2-4\,t_2^3+9\,t_1\,t_2^3-5\,t_1^2\,t_2^3+t_2^4-3\,t_1\,t_2^4+2\,t_1^2\,t_2^4\right)\Big\},$$

$$\Big\{\text{Link}[10,\text{Alternating},11]\to\frac{t_1+2\,t_2-4\,t_1\,t_2-7\,t_2^2+7\,t_1\,t_2^2+7\,t_2^3-7\,t_1\,t_2^3-4\,t_2^4+2\,t_1\,t_2^4+t_2^5}{\sqrt{t_1}\ t_2^{5/2}},$$

$$\text{Link}[11,\text{NonAlternating},116]\to\frac{t_1+2\,t_2-4\,t_1\,t_2-7\,t_2^2+7\,t_1\,t_2^2+7\,t_2^3-7\,t_1\,t_2^3-4\,t_2^4+2\,t_1\,t_2^4+t_2^5}{\sqrt{t_1}\ t_2^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{Alternating},464]\to-\frac{2\ (-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{Alternating},495]\to-\frac{2\ (-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[9,\text{Alternating},53]\to-\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},384]\to-\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},387]\to-\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{NonAlternating},353]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},369]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},370]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11,\text{NonAlternating},388]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11,\text{NonAlternating},360]\to-\frac{(-1+t_1)\ (-1+t_3)^2}{\sqrt{t_1}\ t_3},$$

$$\text{Link}[11,\text{NonAlternating},363]\to-\frac{(-1+t_1)\ (-1+t_3)^2}{\sqrt{t_1}\ t_3}\Big\},$$

$$\Big\{\text{Link}[9,\text{Alternating},46]\to-\frac{(-1+t_1)\ (-1+t_2)^2\ (-1+t_3)^2}{\sqrt{t_1}\ t_2\ t_3},$$

$$\text{Link}[11,\text{NonAlternating},283]\to-\frac{(-1+t_1)\ (-1+t_2)^2\ (-1+t_3)^2}{\sqrt{t_1}\ t_2\ t_3},$$

$$\text{Link}[11,\text{NonAlternating},322]\to-\frac{(-1+t_1)\ (-1+t_2)^2\ (-1+t_3)^2}{\sqrt{t_1}\ t_2\ t_3}\Big\},$$

$$\Big\{\text{Link}[8,\text{NonAlternating},5]\to-\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[10,\text{NonAlternating},70]\to-\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}}\Big\},$$

$$\Big\{\text{Link}[6,\text{Alternating},4]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[9,\text{NonAlternating},25]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[11,\text{NonAlternating},287]\to\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[11, \text{NonAlternating}, 293] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[11, \text{NonAlternating}, 378] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}},$$

$$\text{Link}[11, \text{NonAlternating}, 408] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ \sqrt{t_3}}\Big\},$$

$$\Big\{\text{Link}[10, \text{NonAlternating}, 83] \to -\frac{(-1+t_1)\ (-1+t_3)^2\ (1+t_2\,t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 391] \to -\frac{(-1+t_1)\ (-1+t_3)^2\ (1+t_2\,t_3)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[8, \text{Alternating}, 16] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ (1+t_2\,t_3)}{\sqrt{t_1}\ t_2\,t_3},$$

$$\text{Link}[11, \text{NonAlternating}, 328] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ (1+t_2\,t_3)}{\sqrt{t_1}\ t_2\,t_3}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 484] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3\ \left(1+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{5/2}},$$

$$\text{Link}[11, \text{Alternating}, 494] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)^3\ \left(1+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{5/2}}\Big\},$$

$$\Big\{\text{Link}[10, \text{Alternating}, 151] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-3\,t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 409] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-3\,t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{NonAlternating}, 280] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 281] \to -\frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[9, \text{Alternating}, 54] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 282] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 290] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 386] \to \frac{(-1+t_1)\ (-1+t_2)\ (-1+t_3)\ \left(1-t_3+t_3^2\right)}{\sqrt{t_1}\ \sqrt{t_2}\ t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 395] \to \frac{(-1+t_1)\,(-1+t_2)\,(-1+t_3)\,\left(1-t_3+t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 465] \to \frac{(-1+t_1)\,(-1+t_2)\,(-1+t_3)\,\left(2-3\,t_3+2\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}},$$

$$\text{Link}[11, \text{Alternating}, 499] \to \frac{(-1+t_1)\,(-1+t_2)\,(-1+t_3)\,\left(2-3\,t_3+2\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{NonAlternating}, 376] \to -\frac{(-1+t_2)\,(-1+t_3)\,\left(-1+t_1\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 399] \to -\frac{(-1+t_2)\,(-1+t_3)\,\left(-1+t_1\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[10, \text{Alternating}, 150] \to -\frac{(-1+t_1)\,(-1+t_3)\,\left(-2+t_2+2\,t_3-2\,t_2\,t_3-t_3^2+2\,t_2\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 410] \to -\frac{(-1+t_1)\,(-1+t_3)\,\left(-2+t_2+2\,t_3-2\,t_2\,t_3-t_3^2+2\,t_2\,t_3^2\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{3/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{NonAlternating}, 383] \to -\frac{(-1+t_1)\,(-1+t_3)^2\,\left(t_2+t_3^3\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{5/2}},$$

$$\text{Link}[11, \text{NonAlternating}, 393] \to -\frac{(-1+t_1)\,(-1+t_3)^2\,\left(t_2+t_3^3\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{5/2}}\Big\},$$

$$\Big\{\text{Link}[11, \text{Alternating}, 483] \to \frac{(-1+t_1)\,(-1+t_3)^2\,\left(t_2+2\,t_3-2\,t_2\,t_3-2\,t_3^2+2\,t_2\,t_3^2+t_3^3\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{5/2}},$$

$$\text{Link}[11, \text{Alternating}, 486] \to \frac{(-1+t_1)\,(-1+t_3)^2\,\left(t_2+2\,t_3-2\,t_2\,t_3-2\,t_3^2+2\,t_2\,t_3^2+t_3^3\right)}{\sqrt{t_1}\,\sqrt{t_2}\,t_3^{5/2}}\Big\},$$

$$\Big\{\text{Link}[10, \text{NonAlternating}, 100] \to \frac{(-1+t_1)\,(-1+t_2)\,(-1+t_3)\,(-1+t_4)}{\sqrt{t_1}\,\sqrt{t_2}\,\sqrt{t_3}\,\sqrt{t_4}},$$

$$\text{Link}[10, \text{NonAlternating}, 103] \to \frac{(-1+t_1)\,(-1+t_2)\,(-1+t_3)\,(-1+t_4)}{\sqrt{t_1}\,\sqrt{t_2}\,\sqrt{t_3}\,\sqrt{t_4}}\Big\}\Big\}$$