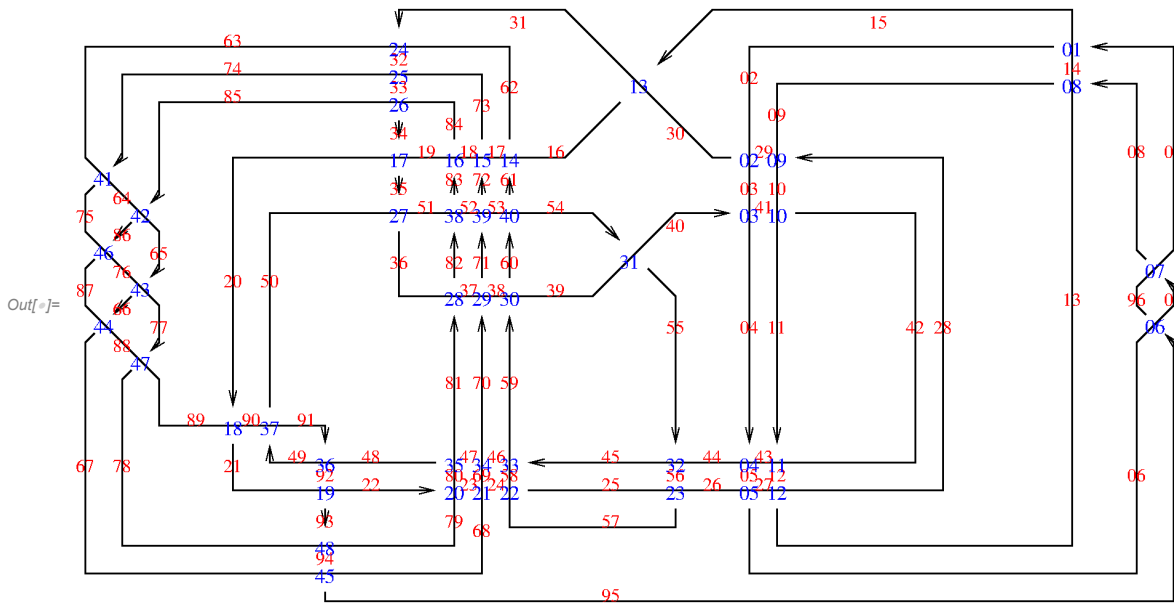


Pensieve header: Notebook for Dalyell meeting 2: the Jones polynomial.

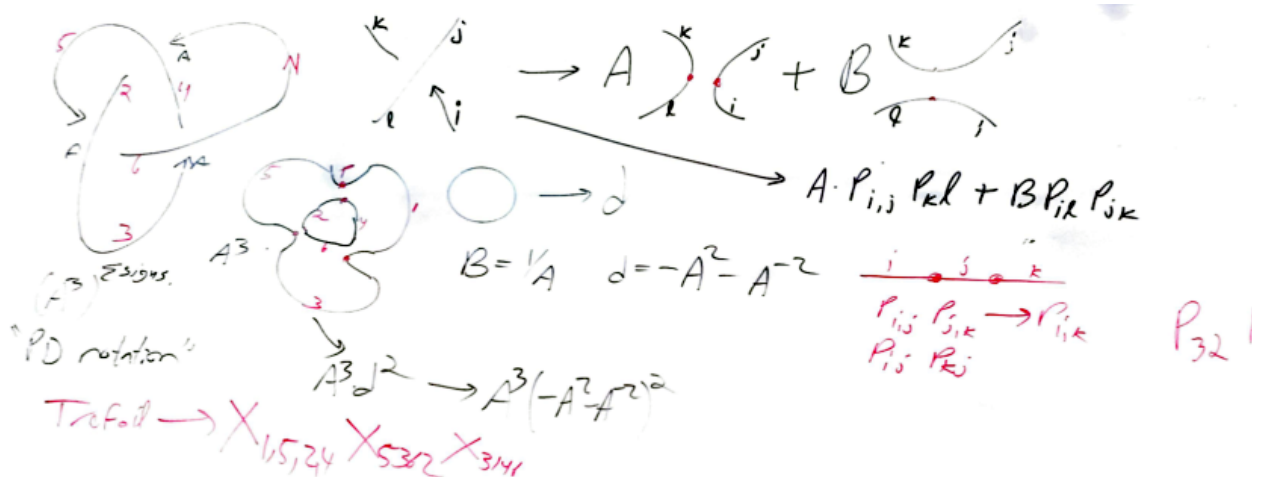
Find everything at <http://drorbn.net/syd3>

Setting Knots to contain all from Knot[3,1] to Knot[10,165] as well as GST48...



Our blackboard from September

16:



```

In[ ]:= KB[pd_PD] := Module[{p, t1, t2, t3, t4, B, d},
  SetAttributes[p, Orderless];
  t1 = pd /. X[i_, j_, k_, l_] -> A * p[i, j] * p[k, l] + B * p[i, l] p[j, k];
  t2 = Expand[t1 /. PD -> Times];
  t3 = t2 /. {p[i_, j_] p[j_, k_] -> p[i, k]};
  t4 = t3 /. {p[i_, i_] -> d, p[i_, j_]^2 -> d};
  Expand[t4 /. {B -> 1/A, d -> -A^2 - 1/A^2}]
]

```

In[ ]:= **Knots**

Out[ ]:=

```
{Knot[3, 1] → PD[X[1, 4, 2, 5], X[3, 6, 4, 1], X[5, 2, 6, 3]], ... 248 ... ,
  GST48 → PD[X[1, 15, 2, 14], X[29, 2, 30, 3], X[40, 4, 41, 3], X[4, 44, 5, 43], ... 40 ... ,
  X[94, 67, 95, 68], X[86, 75, 87, 76], X[77, 88, 78, 89], X[93, 78, 94, 79]]}
```

large output    show less    show more    show all    set size limit...

In[ ]:= **Knot[8, 17] /. Knots**

Out[ ]:= PD[X[6, 2, 7, 1], X[14, 8, 15, 7], X[8, 3, 9, 4], X[2, 13, 3, 14],  
X[12, 5, 13, 6], X[4, 9, 5, 10], X[16, 12, 1, 11], X[10, 16, 11, 15]]

In[ ]:= **KB[Knot[8, 17] /. Knots]**

Out[ ]:=  $-\frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 2A^{10} + 2A^{14} - A^{18}$

In[ ]:= **tab10 = Table[**

**Echo[Timing[{k, KB[Knot[10, k] /. Knots]}]],**  
**{k, 165}**  
**]**

- » {0.328125, {1,  $-\frac{1}{A^{28}} - \frac{1}{A^{20}} + A^4 - A^{16}$ }}
- » {0.328125, {2,  $-1 - \frac{1}{A^{16}} - \frac{1}{A^8} + A^{16} + A^{24} - A^{28}$ }}
- » {0.34375, {3,  $1 - \frac{1}{A^{24}} - \frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} + A^8 - A^{12} - A^{20}$ }}
- » {0.328125, {4,  $-\frac{1}{A^{16}} - \frac{1}{A^8} + \frac{1}{A^4} + A^4 - A^{12} - A^{20} + A^{24} - A^{28}$ }}
- » {0.296875, {5,  $\frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} - 2A^6 - A^{14} + A^{18}$ }}
- » {0.296875, {6,  $1 - \frac{1}{A^{20}} - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{1}{A^4} - A^8 + 2A^{12} - A^{16} + A^{20} - A^{24}$ }}
- » {0.421875, {7,  $1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} - A^4 + 2A^8 - A^{12} + A^{16} - A^{20}$ }}
- » {0.34375, {8,  $-1 - \frac{1}{A^{16}} - \frac{1}{A^8} + \frac{1}{A^4} + A^{16} - A^{20} + A^{24} - A^{28}$ }}
- » {0.3125, {9,  $-\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - 2A^4 + A^8 - A^{12} + A^{16} - A^{20}$ }}
- » {0.3125, {10,  $\frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{2}{A^6} + \frac{1}{A^2} - A^2 + A^{10} - 2A^{14} + A^{18} - 2A^{22} + A^{26}$ }}
- » {0.546875, {11,  $1 - \frac{1}{A^{20}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - A^8 + 2A^{12} - 2A^{16} + A^{20} - A^{24}$ }}

- »  $\left\{ 0.296875, \left\{ 12, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3 A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 13, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2 A^4 + 2 A^8 - 2 A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 14, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - A^8 + 3 A^{12} - 2 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 15, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} - \frac{1}{A^6} - \frac{1}{A^2} + A^2 - 2 A^6 + A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 16, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2 A^4 + A^8 - 2 A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 17, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 2 A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 18, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - 2 A^8 + 2 A^{12} - 2 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 19, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - A^2 + A^{10} - 2 A^{14} + 2 A^{18} - 2 A^{22} + A^{26} \right\} \right\}$
- »  $\left\{ 0.484375, \left\{ 20, 1 - \frac{1}{A^{24}} - \frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 21, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} - A^8 + 3 A^{12} - A^{16} + A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 22, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2 A^8 + 2 A^{12} - 2 A^{16} + A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.40625, \left\{ 23, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3 A^{10} + 2 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 24, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - A^4 + 3 A^8 - 2 A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 25, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 3 A^{12} - 3 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 26, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{3}{A^8} - \frac{2}{A^4} - 2 A^8 + 2 A^{12} - 3 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 27, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{2}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2 A^6 - 3 A^{10} + 3 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 28, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{2}{A^{10}} - \frac{2}{A^6} + \frac{1}{A^2} - 2 A^2 - A^6 + A^{10} - 2 A^{14} + 2 A^{18} - 2 A^{22} + A^{26} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 29, 2 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} + A^4 - 2 A^8 + 2 A^{12} - 3 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 30, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - 2 A^4 + 3 A^8 - 2 A^{12} + 2 A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.421875, \left\{ 31, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 2 A^6 - 2 A^{10} + 2 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 32, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 3 A^4 + 3 A^8 - 2 A^{12} + 2 A^{16} - A^{20} \right\} \right\}$

- »  $\left\{ 0.4375, \left\{ 33, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2 A^6 - 3 A^{10} + 2 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 34, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} + \frac{1}{A^2} - A^2 - A^6 - 2 A^{14} + A^{18} - A^{22} + A^{26} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 35, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2 A^8 + 2 A^{12} - 2 A^{16} + A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 36, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - 2 A^4 + 2 A^8 - A^{12} + 2 A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 37, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3 A^{10} + 2 A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 38, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 2 A^4 + 2 A^8 - 2 A^{12} + 2 A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 39, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - 2 A^8 + 3 A^{12} - 2 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 40, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2 A^2 + A^6 - 4 A^{10} + 3 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.40625, \left\{ 41, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - 2 A^8 + 3 A^{12} - 3 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 42, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3 A^6 - 3 A^{10} + 3 A^{14} - 3 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 43, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2 A^2 + 2 A^6 - 3 A^{10} + 3 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 44, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} - 3 A^8 + 3 A^{12} - 3 A^{16} + 3 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 45, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 3 A^6 - 4 A^{10} + 3 A^{14} - 3 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 46, -1 - \frac{1}{A^{28}} + \frac{1}{A^{24}} - \frac{1}{A^{20}} + \frac{1}{A^{16}} + \frac{1}{A^8} + \frac{1}{A^4} - 2 A^8 - A^{16} \right\} \right\}$
- »  $\left\{ 0.46875, \left\{ 47, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} - 2 A^6 + A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 48, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - 2 A^2 + A^6 - 2 A^{10} + 2 A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 49, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{1}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 3 A^{12} - 2 A^{16} + 2 A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 50, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2 A^4 + A^8 - 3 A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 51, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2 A^2 + A^6 - 3 A^{10} + 3 A^{14} - 2 A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 52, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{3}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} + A^2 - 3 A^6 + 2 A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 53, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{4}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - 2 A^4 + 4 A^8 - 2 A^{12} + 2 A^{16} - A^{20} \right\} \right\}$

- »  $\left\{ 0.296875, \left\{ 54, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} - 2A^6 + 2A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.46875, \left\{ 55, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 56, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 57, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 58, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 2A^4 + 2A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 59, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 60, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{3}{A^{12}} - \frac{3}{A^8} - 3A^4 + 4A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 61, -\frac{1}{A^{28}} + \frac{1}{A^{24}} - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{1}{A^{12}} + \frac{1}{A^4} + A^4 - 2A^8 - A^{16} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 62, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} - 3A^6 + A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 63, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 64, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} - 2A^4 + 2A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 65, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 2A^6 - 3A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 66, 2 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 3A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 67, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 68, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{2}{A^{18}} - \frac{3}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} + A^2 - 3A^6 + 2A^{10} - A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 69, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 4A^{10} + 3A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 70, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 71, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 72, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.46875, \left\{ 73, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 3A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 74, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - \frac{1}{A^4} - A^4 + 4A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\}$

- »  $\left\{0.296875, \left\{75, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{2}{A^4} - A^4 - 4A^8 + 3A^{12} - 3A^{16} + 3A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.515625, \left\{76, 2 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2A^4 + 2A^8 - 3A^{12} - A^{20}\right\}\right\}$
- »  $\left\{0.25, \left\{77, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{2}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - 2A^2 + A^6 - 4A^{10} + 2A^{14} - A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.265625, \left\{78, -\frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - 2A^8 + 4A^{12} - 2A^{16} + 2A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.28125, \left\{79, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - 2A^2 + A^6 - 3A^{10} + 3A^{14} - A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.234375, \left\{80, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 4A^{12} - 3A^{16} + 2A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.25, \left\{81, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 2A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.296875, \left\{82, -\frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - 2A^8 + 3A^{12} - 2A^{16} + 2A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.40625, \left\{83, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 3A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.265625, \left\{84, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2A^2 + 2A^6 - 5A^{10} + 3A^{14} - 2A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.296875, \left\{85, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - A^2 + 2A^{10} - 2A^{14} + 2A^{18} - 2A^{22} + A^{26}\right\}\right\}$
- »  $\left\{0.515625, \left\{86, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} - 3A^8 + 3A^{12} - 4A^{16} + 3A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.28125, \left\{87, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} - 3A^8 + 4A^{12} - 3A^{16} + 2A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.296875, \left\{88, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 3A^6 - 5A^{10} + 4A^{14} - 3A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.265625, \left\{89, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 4A^{14} - 2A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.265625, \left\{90, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 3A^{12} - 4A^{16} + 2A^{20} - A^{24}\right\}\right\}$
- »  $\left\{0.28125, \left\{91, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22}\right\}\right\}$
- »  $\left\{0.28125, \left\{92, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 4A^4 + 3A^8 - 4A^{12} + 2A^{16} - A^{20}\right\}\right\}$
- »  $\left\{0.3125, \left\{93, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{2}{A^{10}} - \frac{3}{A^6} + \frac{2}{A^2} - A^2 - A^6 + A^{10} - 3A^{14} + 3A^{18} - 2A^{22} + A^{26}\right\}\right\}$
- »  $\left\{0.265625, \left\{94, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 3A^{12} + 2A^{16} - A^{20}\right\}\right\}$
- »  $\left\{0.28125, \left\{95, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22}\right\}\right\}$

- »  $\left\{ 0.25, \left\{ 96, 2 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} + A^4 - 3A^8 + 3A^{12} - 5A^{16} + 3A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 97, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} - 3A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 98, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{4}{A^4} + 2A^4 - A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 99, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{3}{A^2} - 3A^2 + 2A^6 - 3A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 100, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{2}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - 2A^2 - A^6 + 2A^{10} - 2A^{14} + 3A^{18} - 2A^{22} + A^{26} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 101, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{2}{A^4} - 4A^8 + 3A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 102, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{2}{A^4} - 3A^8 + 3A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 103, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 104, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 105, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{3}{A^8} - 3A^4 + 4A^8 - 4A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 106, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.5625, \left\{ 107, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{5}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 108, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{2}{A^{18}} - \frac{3}{A^{14}} + \frac{2}{A^{10}} - \frac{1}{A^2} + A^2 - 3A^6 + 2A^{10} - 2A^{14} + A^{18} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 109, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 110, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.453125, \left\{ 111, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 4A^{12} + 2A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 112, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{4}{A^4} - 3A^8 + 4A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 113, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{4}{A^{10}} + \frac{4}{A^6} - \frac{1}{A^2} - 2A^2 + 3A^6 - 6A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.515625, \left\{ 114, -\frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{3}{A^8} - 4A^4 + 4A^8 - 3A^{12} + 3A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 115, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 5A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 116, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{4}{A^{12}} + \frac{3}{A^8} - \frac{4}{A^4} + A^4 - 3A^8 + 4A^{12} - 4A^{16} + 3A^{20} - A^{24} \right\} \right\}$

- »  $\left\{ 0.28125, \left\{ 117, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{5}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 118, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 119, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{4}{A^4} + A^4 - 3A^8 + 4A^{12} - 5A^{16} + 3A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 120, 2 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{6}{A^{16}} + \frac{3}{A^{12}} - \frac{4}{A^8} + \frac{1}{A^4} - 3A^4 + 5A^8 - 4A^{12} + 3A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 121, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 4A^6 - 5A^{10} + 5A^{14} - 3A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 122, -\frac{1}{A^{20}} + \frac{4}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{4}{A^4} - 4A^8 + 5A^{12} - 4A^{16} + 3A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 123, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{4}{A^6} - \frac{2}{A^2} - 2A^2 + 4A^6 - 5A^{10} + 5A^{14} - 4A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 124, \frac{1}{A^{12}} + \frac{1}{A^8} - A^4 - A^8 - A^{12} - A^{16} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 125, \frac{1}{A^{18}} - \frac{1}{A^6} - \frac{1}{A^2} - A^2 - A^6 + A^{18} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 126, \frac{1}{A^{14}} - \frac{1}{A^{10}} - \frac{2}{A^2} - A^2 - A^{10} + A^{14} + A^{22} \right\} \right\}$
- »  $\left\{ 0.40625, \left\{ 127, 1 - \frac{2}{A^{12}} - \frac{2}{A^4} + 2A^{12} - A^{16} + A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.484375, \left\{ 128, \frac{1}{A^{12}} + \frac{1}{A^4} - A^4 - A^8 - A^{12} - A^{20} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 129, \frac{1}{A^{14}} - \frac{1}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 130, \frac{1}{A^{18}} - \frac{1}{A^{14}} - \frac{1}{A^6} - \frac{1}{A^2} - A^2 - A^6 + A^{10} + A^{18} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 131, -\frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} + 2A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 132, -\frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^{18} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 133, -\frac{1}{A^{16}} - \frac{2}{A^8} + A^8 + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 134, -\frac{1}{A^{16}} + \frac{2}{A^{12}} + \frac{1}{A^4} - A^4 - 2A^{12} - A^{20} \right\} \right\}$
- »  $\left\{ 0.265625, \left\{ 135, \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - 2A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.28125, \left\{ 136, -1 + \frac{1}{A^{12}} - \frac{1}{A^8} - A^4 + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 137, -\frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}$



- »  $\left\{ 0.4375, \left\{ 138, -\frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 + A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 139, 1 + \frac{1}{A^{20}} - A^4 - A^8 - A^{12} - A^{16} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 140, -\frac{1}{A^{14}} - A^2 - A^6 + A^{18} \right\} \right\}$
- »  $\left\{ 0.53125, \left\{ 141, -1 - \frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} - A^4 + A^8 + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.421875, \left\{ 142, -1 + \frac{2}{A^{12}} - A^4 - A^{12} - A^{20} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 143, \frac{1}{A^{14}} - \frac{2}{A^{10}} - \frac{2}{A^2} + A^6 - A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.375, \left\{ 144, 2 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} - A^8 + A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.515625, \left\{ 145, -\frac{1}{A^{18}} - \frac{1}{A^{14}} - A^2 + A^{18} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 146, \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - A^{10} + A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.375, \left\{ 147, -1 - \frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - A^4 + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 148, \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.359375, \left\{ 149, 1 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{3}{A^4} + 2A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 150, -\frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 - 2A^{12} + A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 151, \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 - 2A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\}$
- »  $\left\{ 0.40625, \left\{ 152, 1 - \frac{1}{A^{16}} - \frac{1}{A^{12}} - \frac{1}{A^8} - \frac{2}{A^4} + A^8 + A^{12} + A^{20} - A^{24} \right\} \right\}$
- »  $\left\{ 0.34375, \left\{ 153, \frac{1}{A^{18}} - \frac{2}{A^2} - A^2 - A^6 + A^{22} \right\} \right\}$
- »  $\left\{ 0.25, \left\{ 154, -\frac{1}{A^{20}} + \frac{1}{A^{16}} + \frac{1}{A^8} + \frac{1}{A^4} - 2A^8 - A^{16} - A^{20} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 155, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{1}{A^{12}} + \frac{1}{A^8} - 2A^8 + A^{12} - A^{16} \right\} \right\}$
- »  $\left\{ 0.328125, \left\{ 156, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{1}{A^{14}} - \frac{2}{A^{10}} - A^2 + 2A^6 - 2A^{10} + A^{14} \right\} \right\}$
- »  $\left\{ 0.296875, \left\{ 157, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - \frac{1}{A^4} - 3A^4 + 2A^8 - 2A^{12} \right\} \right\}$
- »  $\left\{ 0.3125, \left\{ 158, 2 - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - A^8 + A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\}$

$$\begin{aligned}
 & \gg \left\{ 0.28125, \left\{ 159, \frac{1}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - A^{10} + 2 A^{14} - 2 A^{18} + A^{22} \right\} \right\} \\
 & \gg \left\{ 0.28125, \left\{ 160, -1 + \frac{2}{A^{12}} - \frac{1}{A^8} - A^4 - A^{12} + A^{16} - A^{20} \right\} \right\} \\
 & \gg \left\{ 0.421875, \left\{ 161, -\frac{1}{A^{20}} - \frac{1}{A^{16}} - \frac{1}{A^8} + A^{16} \right\} \right\} \\
 & \gg \left\{ 0.328125, \left\{ 162, 1 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} + 2 A^{12} - 2 A^{16} + A^{20} - A^{24} \right\} \right\} \\
 & \gg \left\{ 0.25, \left\{ 163, \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} + A^6 - 2 A^{10} + 2 A^{14} - 3 A^{18} + A^{22} \right\} \right\} \\
 & \gg \left\{ 0.265625, \left\{ 164, \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - 2 A^{10} + 2 A^{14} - 2 A^{18} + A^{22} \right\} \right\} \\
 & \gg \left\{ 0.265625, \left\{ 165, -1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{1}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2 A^8 + 2 A^{12} - 2 A^{16} \right\} \right\} \\
 \text{Out[*=]=} & \left\{ \left\{ 0.328125, \left\{ 1, -\frac{1}{A^{28}} - \frac{1}{A^{20}} + A^4 - A^{16} \right\} \right\}, \left\{ 0.328125, \left\{ 2, -1 - \frac{1}{A^{16}} - \frac{1}{A^8} + A^{16} + A^{24} - A^{28} \right\} \right\}, \right. \\
 & \left\{ 0.34375, \left\{ 3, 1 - \frac{1}{A^{24}} - \frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} + A^8 - A^{12} - A^{20} \right\} \right\}, \\
 & \left\{ 0.328125, \left\{ 4, -\frac{1}{A^{16}} - \frac{1}{A^8} + \frac{1}{A^4} + A^4 - A^{12} - A^{20} + A^{24} - A^{28} \right\} \right\}, \\
 & \left\{ 0.296875, \left\{ 5, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} - 2 A^6 - A^{14} + A^{18} \right\} \right\}, \\
 & \left\{ 0.296875, \left\{ 6, 1 - \frac{1}{A^{20}} - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{1}{A^4} - A^8 + 2 A^{12} - A^{16} + A^{20} - A^{24} \right\} \right\}, \\
 & \left\{ 0.421875, \left\{ 7, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} - A^4 + 2 A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}, \\
 & \left\{ 0.34375, \left\{ 8, -1 - \frac{1}{A^{16}} - \frac{1}{A^8} + \frac{1}{A^4} + A^{16} - A^{20} + A^{24} - A^{28} \right\} \right\}, \\
 & \left\{ 0.3125, \left\{ 9, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - 2 A^4 + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}, \\
 & \left\{ 0.3125, \left\{ 10, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{2}{A^6} + \frac{1}{A^2} - A^2 + A^{10} - 2 A^{14} + A^{18} - 2 A^{22} + A^{26} \right\} \right\}, \\
 & \left\{ 0.546875, \left\{ 11, 1 - \frac{1}{A^{20}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - A^8 + 2 A^{12} - 2 A^{16} + A^{20} - A^{24} \right\} \right\}, \\
 & \left\{ 0.296875, \left\{ 12, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3 A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\}, \\
 & \left\{ 0.265625, \left\{ 13, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2 A^4 + 2 A^8 - 2 A^{12} + A^{16} - A^{20} \right\} \right\}, \\
 & \left\{ 0.28125, \left\{ 14, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - A^8 + 3 A^{12} - 2 A^{16} + 2 A^{20} - A^{24} \right\} \right\}, \\
 & \left\{ 0.3125, \left\{ 15, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} - \frac{1}{A^6} - \frac{1}{A^2} + A^2 - 2 A^6 + A^{10} - A^{14} + A^{18} \right\} \right\},
 \end{aligned}$$

$$\left\{ \emptyset.328125, \left\{ 16, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2A^4 + A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 17, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 2A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 18, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - 2A^8 + 2A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.34375, \left\{ 19, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - A^2 + A^{10} - 2A^{14} + 2A^{18} - 2A^{22} + A^{26} \right\} \right\},$$

$$\left\{ \emptyset.484375, \left\{ 20, 1 - \frac{1}{A^{24}} - \frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.3125, \left\{ 21, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} - A^8 + 3A^{12} - A^{16} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 22, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2A^8 + 2A^{12} - 2A^{16} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.40625, \left\{ 23, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 24, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - A^4 + 3A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 25, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 3A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 26, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{3}{A^8} - \frac{2}{A^4} - 2A^8 + 2A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 27, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{2}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 28, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{2}{A^{10}} - \frac{2}{A^6} + \frac{1}{A^2} - 2A^2 - A^6 + A^{10} - 2A^{14} + 2A^{18} - 2A^{22} + A^{26} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 29, 2 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} + A^4 - 2A^8 + 2A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 30, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - 2A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.421875, \left\{ 31, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 2A^6 - 2A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 32, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.4375, \left\{ 33, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 3A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 34, \frac{1}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} + \frac{1}{A^2} - A^2 - A^6 - 2A^{14} + A^{18} - A^{22} + A^{26} \right\} \right\},$$

$$\left\{ \emptyset.25, \left\{ 35, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2A^8 + 2A^{12} - 2A^{16} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 36, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - 2A^4 + 2A^8 - A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 37, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 3A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 38, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 2A^4 + 2A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 39, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - 2A^8 + 3A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 40, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2A^2 + A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.40625, \left\{ 41, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 3A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 42, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 3A^{10} + 3A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 43, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 44, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} - 3A^8 + 3A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 45, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 3A^6 - 4A^{10} + 3A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.328125, \left\{ 46, -1 - \frac{1}{A^{28}} + \frac{1}{A^{24}} - \frac{1}{A^{20}} + \frac{1}{A^{16}} + \frac{1}{A^8} + \frac{1}{A^4} - 2A^8 - A^{16} \right\} \right\},$$

$$\left\{ 0.46875, \left\{ 47, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{1}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} - 2A^6 + A^{10} - A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 48, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - 2A^2 + A^6 - 2A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 49, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{3}{A^{12}} + \frac{1}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 3A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 50, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2A^4 + A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 51, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 52, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{3}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} + A^2 - 3A^6 + 2A^{10} - A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 53, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{4}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - 2A^4 + 4A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 54, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^6} - \frac{2}{A^2} - 2A^6 + 2A^{10} - A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.46875, \left\{ 55, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 56, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.359375, \left\{ 57, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 58, 1 - \frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 2A^4 + 2A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 59, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 60, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{3}{A^{12}} - \frac{3}{A^8} - 3A^4 + 4A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.359375, \left\{ 61, -\frac{1}{A^{28}} + \frac{1}{A^{24}} - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{1}{A^{12}} + \frac{1}{A^4} + A^4 - 2A^8 - A^{16} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 62, \frac{1}{A^{26}} - \frac{1}{A^{22}} + \frac{2}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} - 3A^6 + A^{10} - A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 63, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 64, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{2}{A^{16}} + \frac{3}{A^{12}} - \frac{1}{A^8} - 2A^4 + 2A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 65, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 2A^6 - 3A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 66, 2 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 3A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 67, -\frac{1}{A^{24}} + \frac{1}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - 2A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.328125, \left\{ 68, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{2}{A^{18}} - \frac{3}{A^{14}} + \frac{1}{A^{10}} - \frac{1}{A^2} + A^2 - 3A^6 + 2A^{10} - A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 69, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 4A^{10} + 3A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 70, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 2A^4 + 3A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 71, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 72, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.46875, \left\{ 73, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 3A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 74, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{3}{A^8} - \frac{1}{A^4} - A^4 + 4A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 75, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{2}{A^4} - A^4 - 4A^8 + 3A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.515625, \left\{ 76, 2 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - 2A^4 + 2A^8 - 3A^{12} - A^{20} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 77, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{2}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - 2A^2 + A^6 - 4A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 78, -\frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - 2A^8 + 4A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 79, \frac{1}{A^{22}} - \frac{1}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - 2A^2 + A^6 - 3A^{10} + 3A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.234375, \left\{ 80, 1 - \frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} + A^4 - A^8 + 4A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.25, \left\{ 81, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 82, -\frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{3}{A^4} - 2A^8 + 3A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.40625, \left\{ 83, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 84, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2A^2 + 2A^6 - 5A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 85, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{1}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - A^2 + 2A^{10} - 2A^{14} + 2A^{18} - 2A^{22} + A^{26} \right\} \right\},$$

$$\left\{ \emptyset.515625, \left\{ 86, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} - 3A^8 + 3A^{12} - 4A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 87, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} - 3A^8 + 4A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 88, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - A^2 + 3A^6 - 5A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 89, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{1}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 90, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 3A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 91, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 92, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 4A^4 + 3A^8 - 4A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.3125, \left\{ 93, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{2}{A^{10}} - \frac{3}{A^6} + \frac{2}{A^2} - A^2 - A^6 + A^{10} - 3A^{14} + 3A^{18} - 2A^{22} + A^{26} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 94, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{3}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 95, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.25, \left\{ 96, 2 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} + A^4 - 3A^8 + 3A^{12} - 5A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 97, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{3}{A^4} - 3A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 98, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{2}{A^8} - \frac{4}{A^4} + 2A^4 - A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 99, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{3}{A^2} - 3A^2 + 2A^6 - 3A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.328125, \left\{ 100, \frac{1}{A^{18}} - \frac{2}{A^{14}} + \frac{2}{A^{10}} - \frac{3}{A^6} + \frac{1}{A^2} - 2A^2 - A^6 + 2A^{10} - 2A^{14} + 3A^{18} - 2A^{22} + A^{26} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 101, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{4}{A^8} - \frac{2}{A^4} - 4A^8 + 3A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.34375, \left\{ 102, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{2}{A^4} - 3A^8 + 3A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.359375, \left\{ 103, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 3A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.34375, \left\{ 104, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{3}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{1}{A^2} - A^2 + 2A^6 - 4A^{10} + 3A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 105, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{3}{A^8} - 3A^4 + 4A^8 - 4A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 106, -\frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} - 3A^4 + 3A^8 - 3A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.5625, \left\{ 107, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{5}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 + 3A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.34375, \left\{ 108, \frac{1}{A^{26}} - \frac{2}{A^{22}} + \frac{2}{A^{18}} - \frac{3}{A^{14}} + \frac{2}{A^{10}} - \frac{1}{A^2} + A^2 - 3A^6 + 2A^{10} - 2A^{14} + A^{18} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 109, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - 2A^2 + 2A^6 - 4A^{10} + 4A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.3125, \left\{ 110, 1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{4}{A^{12}} + \frac{3}{A^8} - \frac{3}{A^4} + A^4 - 2A^8 + 4A^{12} - 4A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.453125, \left\{ 111, 1 - \frac{1}{A^{24}} + \frac{2}{A^{20}} - \frac{3}{A^{16}} + \frac{4}{A^{12}} - \frac{2}{A^8} + \frac{1}{A^4} - 3A^4 + 2A^8 - 4A^{12} + 2A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 112, -\frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{3}{A^{12}} + \frac{3}{A^8} - \frac{4}{A^4} - 3A^8 + 4A^{12} - 3A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 113, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{4}{A^{10}} + \frac{4}{A^6} - \frac{1}{A^2} - 2A^2 + 3A^6 - 6A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.515625, \left\{ 114, -\frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{4}{A^{16}} + \frac{4}{A^{12}} - \frac{3}{A^8} - 4A^4 + 4A^8 - 3A^{12} + 3A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 115, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 5A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 116, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{4}{A^{12}} + \frac{3}{A^8} - \frac{4}{A^4} + A^4 - 3A^8 + 4A^{12} - 4A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 117, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{5}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 5A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 118, \frac{1}{A^{22}} - \frac{3}{A^{18}} + \frac{4}{A^{14}} - \frac{4}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 3A^6 - 4A^{10} + 4A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 119, 1 - \frac{1}{A^{20}} + \frac{3}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{4}{A^4} + A^4 - 3A^8 + 4A^{12} - 5A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 120, 2 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{6}{A^{16}} + \frac{3}{A^{12}} - \frac{4}{A^8} + \frac{1}{A^4} - 3A^4 + 5A^8 - 4A^{12} + 3A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.25, \left\{ 121, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{3}{A^6} - \frac{2}{A^2} - 2A^2 + 4A^6 - 5A^{10} + 5A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 122, -\frac{1}{A^{20}} + \frac{4}{A^{16}} - \frac{4}{A^{12}} + \frac{4}{A^8} - \frac{4}{A^4} - 4A^8 + 5A^{12} - 4A^{16} + 3A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 123, \frac{1}{A^{22}} - \frac{4}{A^{18}} + \frac{5}{A^{14}} - \frac{5}{A^{10}} + \frac{4}{A^6} - \frac{2}{A^2} - 2A^2 + 4A^6 - 5A^{10} + 5A^{14} - 4A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 124, \frac{1}{A^{12}} + \frac{1}{A^8} - A^4 - A^8 - A^{12} - A^{16} \right\} \right\}, \left\{ 0.359375, \left\{ 125, \frac{1}{A^{18}} - \frac{1}{A^6} - \frac{1}{A^2} - A^2 - A^6 + A^{18} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 126, \frac{1}{A^{14}} - \frac{1}{A^{10}} - \frac{2}{A^2} - A^2 - A^{10} + A^{14} + A^{22} \right\} \right\},$$

$$\left\{ 0.40625, \left\{ 127, 1 - \frac{2}{A^{12}} - \frac{2}{A^4} + 2A^{12} - A^{16} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.484375, \left\{ 128, \frac{1}{A^{12}} + \frac{1}{A^4} - A^4 - A^8 - A^{12} - A^{20} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 129, \frac{1}{A^{14}} - \frac{1}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 130, \frac{1}{A^{18}} - \frac{1}{A^{14}} - \frac{1}{A^6} - \frac{1}{A^2} - A^2 - A^6 + A^{10} + A^{18} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 131, -\frac{2}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} + 2A^8 - A^{12} + A^{16} - A^{20} \right\} \right\}, \left\{ 0.265625, \left\{ 132, -\frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^{18} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 133, -\frac{1}{A^{16}} - \frac{2}{A^8} + A^8 + A^{16} - A^{20} \right\} \right\}, \left\{ 0.3125, \left\{ 134, -\frac{1}{A^{16}} + \frac{2}{A^{12}} + \frac{1}{A^4} - A^4 - 2A^{12} - A^{20} \right\} \right\},$$

$$\left\{ 0.265625, \left\{ 135, \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - 2A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.28125, \left\{ 136, -1 + \frac{1}{A^{12}} - \frac{1}{A^8} - A^4 + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.296875, \left\{ 137, -\frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{2}{A^8} + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.4375, \left\{ 138, -\frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 + A^8 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.34375, \left\{ 139, 1 + \frac{1}{A^{20}} - A^4 - A^8 - A^{12} - A^{16} \right\} \right\}, \left\{ 0.328125, \left\{ 140, -\frac{1}{A^{14}} - A^2 - A^6 + A^{18} \right\} \right\},$$

$$\left\{ 0.53125, \left\{ 141, -1 - \frac{1}{A^{16}} + \frac{1}{A^{12}} - \frac{1}{A^8} - A^4 + A^8 + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ 0.421875, \left\{ 142, -1 + \frac{2}{A^{12}} - A^4 - A^{12} - A^{20} \right\} \right\},$$

$$\left\{ 0.359375, \left\{ 143, \frac{1}{A^{14}} - \frac{2}{A^{10}} - \frac{2}{A^2} + A^6 - A^{10} + A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ 0.375, \left\{ 144, 2 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} - A^8 + A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ 0.515625, \left\{ 145, -\frac{1}{A^{18}} - \frac{1}{A^{14}} - A^2 + A^{18} \right\} \right\},$$



$$\left\{ \emptyset.34375, \left\{ 146, \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - A^{10} + A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.375, \left\{ 147, -1 - \frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - A^4 + A^8 - A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 148, \frac{1}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} - A^2 - A^{10} + 2A^{14} - A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.359375, \left\{ 149, 1 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{3}{A^4} + 2A^{12} - 2A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 150, -\frac{1}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} + \frac{1}{A^4} - A^4 - 2A^{12} + A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 151, \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} - A^2 - 2A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.40625, \left\{ 152, 1 - \frac{1}{A^{16}} - \frac{1}{A^{12}} - \frac{1}{A^8} - \frac{2}{A^4} + A^8 + A^{12} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.34375, \left\{ 153, \frac{1}{A^{18}} - \frac{2}{A^2} - A^2 - A^6 + A^{22} \right\} \right\}, \left\{ \emptyset.25, \left\{ 154, -\frac{1}{A^{20}} + \frac{1}{A^{16}} + \frac{1}{A^8} + \frac{1}{A^4} - 2A^8 - A^{16} - A^{20} \right\} \right\},$$

$$\left\{ \emptyset.3125, \left\{ 155, -\frac{1}{A^{20}} + \frac{1}{A^{16}} - \frac{1}{A^{12}} + \frac{1}{A^8} - 2A^8 + A^{12} - A^{16} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 156, \frac{1}{A^{22}} - \frac{2}{A^{18}} + \frac{1}{A^{14}} - \frac{2}{A^{10}} - A^2 + 2A^6 - 2A^{10} + A^{14} \right\} \right\},$$

$$\left\{ \emptyset.296875, \left\{ 157, 1 - \frac{1}{A^{24}} + \frac{3}{A^{20}} - \frac{2}{A^{16}} + \frac{2}{A^{12}} - \frac{1}{A^8} - \frac{1}{A^4} - 3A^4 + 2A^8 - 2A^{12} \right\} \right\},$$

$$\left\{ \emptyset.3125, \left\{ 158, 2 - \frac{2}{A^{12}} + \frac{2}{A^8} - \frac{2}{A^4} - A^8 + A^{12} - 3A^{16} + 2A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 159, \frac{1}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.28125, \left\{ 160, -1 + \frac{2}{A^{12}} - \frac{1}{A^8} - A^4 - A^{12} + A^{16} - A^{20} \right\} \right\}, \left\{ \emptyset.421875, \left\{ 161, -\frac{1}{A^{20}} - \frac{1}{A^{16}} - \frac{1}{A^8} + A^{16} \right\} \right\},$$

$$\left\{ \emptyset.328125, \left\{ 162, 1 - \frac{2}{A^{12}} + \frac{1}{A^8} - \frac{2}{A^4} + 2A^{12} - 2A^{16} + A^{20} - A^{24} \right\} \right\},$$

$$\left\{ \emptyset.25, \left\{ 163, \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{2}{A^6} - \frac{2}{A^2} + A^6 - 2A^{10} + 2A^{14} - 3A^{18} + A^{22} \right\} \right\},$$

$$\left\{ \emptyset.265625, \left\{ 164, \frac{2}{A^{14}} - \frac{3}{A^{10}} + \frac{1}{A^6} - \frac{2}{A^2} + A^6 - 2A^{10} + 2A^{14} - 2A^{18} + A^{22} \right\} \right\},$$

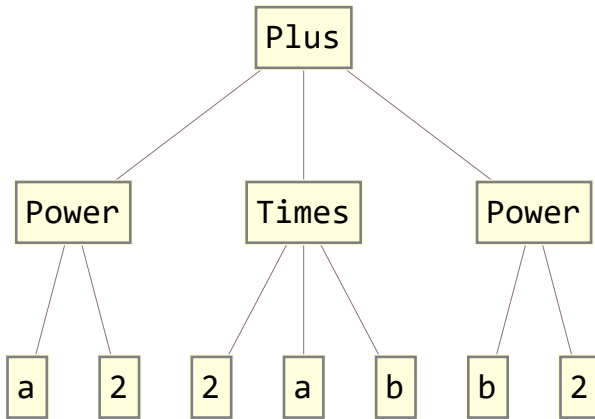
$$\left\{ \emptyset.265625, \left\{ 165, -1 - \frac{1}{A^{20}} + \frac{2}{A^{16}} - \frac{1}{A^{12}} + \frac{2}{A^8} - \frac{1}{A^4} - 2A^8 + 2A^{12} - 2A^{16} \right\} \right\}$$

In[ ]:= Expand [(a + b) ^ 2]

Out[ ]:= a<sup>2</sup> + 2 a b + b<sup>2</sup>

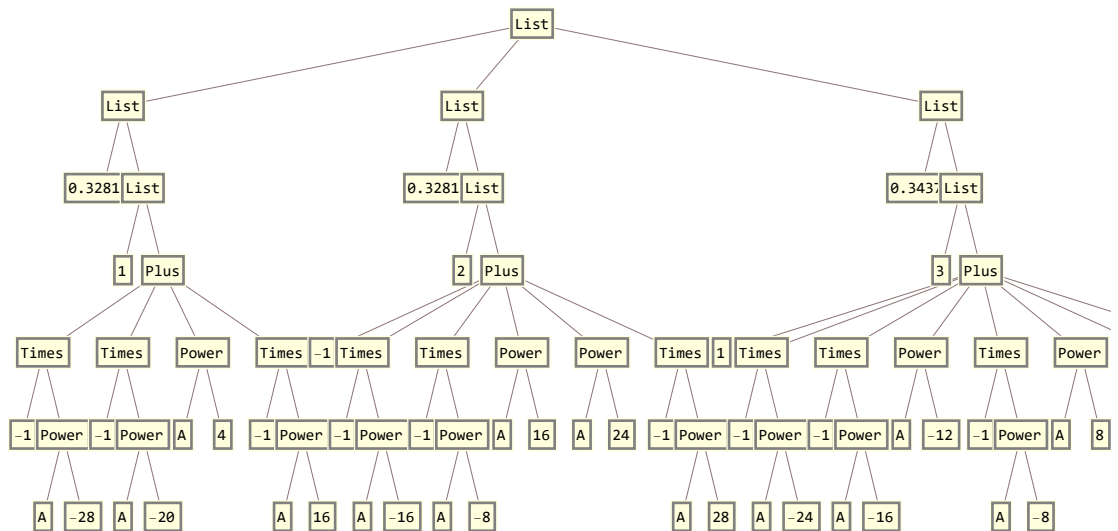
```
In[ ]:= Expand[(a + b)^2] // TreeForm
```

Out[ ]//TreeForm=



```
In[ ]:= tab10[[1 ;; 3]] // TreeForm
```

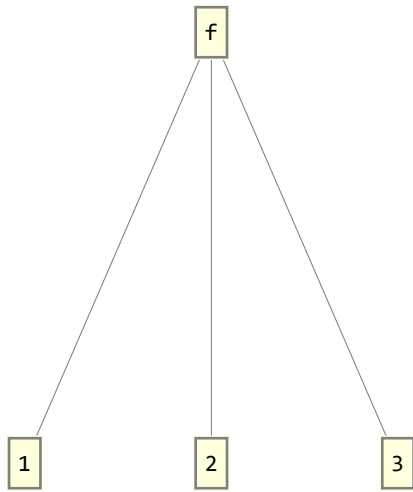
Out[ ]//TreeForm=



```
In[ ]:= f[1, 2, 3]
```

Out[ ]:= f[1, 2, 3]

```
In[ ]:= f[1, 2, 3] // TreeForm
```



`In[ ]:= g@@f[1, 2, 3]`

`Out[ ]:= g[1, 2, 3]`

`In[ ]:= Plus@@{1, 2, 3}`

`Out[ ]:= 6`

`In[ ]:= Plus@@tab10`

`Out[ ]:= {52.625,`  

$$\left\{ 13695, 53 - \frac{3}{A^{28}} + \frac{8}{A^{26}} - \frac{31}{A^{24}} + \frac{28}{A^{22}} + \frac{18}{A^{20}} - \frac{59}{A^{18}} - \frac{49}{A^{16}} + \frac{112}{A^{14}} - \frac{5}{A^{12}} - \frac{141}{A^{10}} + \frac{12}{A^8} + \frac{69}{A^6} - \frac{80}{A^4} - \frac{88}{A^2} - 76A^2 - 70A^4 + 62A^6 + 7A^8 - 138A^{10} + 18A^{12} + 112A^{14} - 52A^{16} - 72A^{18} + 30A^{20} + 36A^{22} - 35A^{24} + 7A^{26} - 3A^{28} \right\}$$

`In[ ]:= 165 × 166 / 2`

`Out[ ]:= 13695`

`In[ ]:= KB[GST48 /. Knots]`

`Out[ ]:= $Aborted`

```
KB[pd_PD] := Module[{p, t1, t2, t3, t4, B, d},
  SetAttributes[p, Orderless];
  t1 = pd /. X[i_, j_, k_, l_] -> A * p[i, j] * p[k, l] + B * p[i, l] p[j, k];
  t2 = Expand[t1 /. PD -> Times];
  t3 = t2 /. {p[i_, j_] p[j_, k_] -> p[i, k]};
  t4 = t3 /. {p[i_, i_] -> d, p[i_, j_]^2 -> d};
  Expand[t4 /. {B -> 1 / A, d -> -A^2 - 1 / A^2}]
]
```

`In[ ]:= Times@@{1, 2, 3, 4, 5, 6, 7}`

`Out[ ]:= 5040`

In[ ]:= **Times** @@ { }

Out[ ]:= 1

In[ ]:= **pd = GST48 /. Knots**

Out[ ]:= PD[X[1, 15, 2, 14], X[29, 2, 30, 3], X[40, 4, 41, 3], X[4, 44, 5, 43], X[5, 26, 6, 27], X[95, 7, 96, 6], X[7, 1, 8, 96], X[8, 14, 9, 13], X[28, 9, 29, 10], X[41, 11, 42, 10], X[11, 43, 12, 42], X[12, 27, 13, 28], X[15, 31, 16, 30], X[61, 16, 62, 17], X[72, 17, 73, 18], X[83, 18, 84, 19], X[34, 20, 35, 19], X[20, 89, 21, 90], X[92, 21, 93, 22], X[22, 79, 23, 80], X[23, 68, 24, 69], X[24, 57, 25, 58], X[56, 25, 57, 26], X[31, 63, 32, 62], X[32, 74, 33, 73], X[33, 85, 34, 84], X[35, 50, 36, 51], X[81, 37, 82, 36], X[70, 38, 71, 37], X[59, 39, 60, 38], X[54, 39, 55, 40], X[55, 45, 56, 44], X[45, 59, 46, 58], X[46, 70, 47, 69], X[47, 81, 48, 80], X[91, 49, 92, 48], X[49, 91, 50, 90], X[82, 52, 83, 51], X[71, 53, 72, 52], X[60, 54, 61, 53], X[74, 63, 75, 64], X[85, 64, 86, 65], X[65, 76, 66, 77], X[66, 87, 67, 88], X[94, 67, 95, 68], X[86, 75, 87, 76], X[77, 88, 78, 89], X[93, 78, 94, 79]]

In[ ]:= **First**[pd]

Out[ ]:= X[1, 15, 2, 14]

In[ ]:= **Last**[pd]

Out[ ]:= X[93, 78, 94, 79]

In[ ]:= **DeleteCases** [{1, 2, 3}, 2]

Out[ ]:= {1, 3}

```
In[ ]:= FKB[pd_PD] := Module[{p, t1, t2, t3, t4, B, d, KB, todo},
SetAttributes[p, Orderless];
KB = 1;
todo = pd;
While[Length[todo] > 0,
  x = First[todo];
  todo = DeleteCases[todo, x];
  t1 = KB (x /. X[i_, j_, k_, l_] -> A * p[i, j] * p[k, l] + B * p[i, l] * p[j, k]);
  t2 = Expand[t1];
  t3 = t2 /. {p[i_, j_] p[j_, k_] -> p[i, k]};
  t4 = t3 /. {p[i_, i_] -> d, p[i_, j_] ^2 -> d};
  KB = Expand[t4 /. {B -> 1 / A, d -> -A^2 - 1 / A^2}];
];
KB
]
```

In[ ]:= **FKB**[**Knot**[8, 17] /. **Knots**]

Out[ ]:= 
$$-\frac{1}{A^{18}} + \frac{2}{A^{14}} - \frac{2}{A^{10}} + \frac{1}{A^6} - \frac{1}{A^2} - A^2 + A^6 - 2A^{10} + 2A^{14} - A^{18}$$

In[ ]:= **Timing**[**Table**[**FKB**[**Knot**[10, k] /. **Knots**], {k, 165}];]

Out[ ]:= {5.79688, Null}

In[ ]:= **Table**[**CatalanNumber**[**k**], {**k**, **1**, **20**}]

Out[ ]:= {1, 2, 5, 14, 42, 132, 429, 1430, 4862, 16796, 58786, 208012, 742900,  
2674440, 9694845, 35357670, 129644790, 477638700, 1767263190, 6564120420}

In[ ]:= {**1**, **2**, **3**} **∪** {**3**, **4**}

Out[ ]:= {1, 2, 3, 4}

In[ ]:= {**1**, **2**, **3**} **∩** {**3**, **4**}

Out[ ]:= {3}

In[ ]:= **Complement**[{**1**, **2**, **3**, **4**}, {**3**}]

Out[ ]:= {1, 2, 4}

In[ ]:= **x**

Out[ ]:= X[12, 20, 13, 19]

In[ ]:= **List**@@**x**

Out[ ]:= {12, 20, 13, 19}

In[ ]:= **front** = {**1**, **2**, **3**, **6**, **9**, **10**, **11**}

Out[ ]:= {1, 2, 3, 6, 9, 10, 11}

In[ ]:= **todo** = **List**@@**PD**[X[1, 2, 5, 12], X[1, 2, 3, 13]]

Out[ ]:= {X[1, 2, 5, 12], X[1, 2, 3, 13]}

In[ ]:= **v**[**x\_X**] := **Length**[**front** **∩** (**List**@@**x**)]

In[ ]:= **v** /@ **todo**

Out[ ]:= {2, 3}

In[ ]:= **MaximalBy**[**todo**, **v**]

Out[ ]:= {X[1, 2, 3, 13]}

In[ ]:= **pd**

Out[ ]:= PD[X[1, 15, 2, 14], X[29, 2, 30, 3], X[40, 4, 41, 3], X[4, 44, 5, 43], X[5, 26, 6, 27],  
X[95, 7, 96, 6], X[7, 1, 8, 96], X[8, 14, 9, 13], X[28, 9, 29, 10], X[41, 11, 42, 10],  
X[11, 43, 12, 42], X[12, 27, 13, 28], X[15, 31, 16, 30], X[61, 16, 62, 17], X[72, 17, 73, 18],  
X[83, 18, 84, 19], X[34, 20, 35, 19], X[20, 89, 21, 90], X[92, 21, 93, 22], X[22, 79, 23, 80],  
X[23, 68, 24, 69], X[24, 57, 25, 58], X[56, 25, 57, 26], X[31, 63, 32, 62], X[32, 74, 33, 73],  
X[33, 85, 34, 84], X[35, 50, 36, 51], X[81, 37, 82, 36], X[70, 38, 71, 37], X[59, 39, 60, 38],  
X[54, 39, 55, 40], X[55, 45, 56, 44], X[45, 59, 46, 58], X[46, 70, 47, 69],  
X[47, 81, 48, 80], X[91, 49, 92, 48], X[49, 91, 50, 90], X[82, 52, 83, 51], X[71, 53, 72, 52],  
X[60, 54, 61, 53], X[74, 63, 75, 64], X[85, 64, 86, 65], X[65, 76, 66, 77],  
X[66, 87, 67, 88], X[94, 67, 95, 68], X[86, 75, 87, 76], X[77, 88, 78, 89], X[93, 78, 94, 79]]



