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$PrePrint = If[MatrixQ@#, MatrixForm@#, #] &;
MF@Γ[ω_, λ_, L_] := Prepend[Prepend[λT, t# & /@ L]T, Prepend[h# & /@ L, ω]];
Format@Γ@i__ := MatrixForm@MF@Γ@i;
Γ /: Γ[ω1_, λ1_, L1_] Γ[ω2_, λ2_, L2_] := Module[
  {S = Ordering@Join[L1, L2]}, Γ[ω1 ω2, Join[Join[#, Table[0, {Length@λ2}]] & /@ λ1,
    Join[Table[0, {Length@λ1}], #] & /@ λ2][[S]]T[[S]]T, Union[L1, L2]];
P /: P[i_, j_] P[j_, k_] := P[i, k];
P /: P[i_, j_] P[i_, k_] := P[j, k];
P /: P[i_, j_] P[k_, j_] := P[i, k];
P /: P[i_, i_] := -t1/2 -  $\frac{1}{t^{1/2}}$ ;
P /: P[i__]2 := -t1/2 -  $\frac{1}{t^{1/2}}$ ;
Sa,b→c@K_ := S{a,b}→c@K;
S{a__}→c@K_ := If[Length@{a} == 1, K, MS{a}→c@M@K];
Ra,b→c@Γ[ω_, λ_, L_] :=
  Module[{i = FirstPosition[L, a][[1]], j = FirstPosition[L, b][[1]], S, α, ...},
    S = Join[{c}, Delete[L, {{i}, {j}}]]; (* Append *)
    α = λ[[i, i]], β = 1 - λ[[i, j]], γ = λ[[j, i]], δ = λ[[j, j]],
    θ = Delete[λ[[i]], {{i}, {j}}], ε = Delete[λ[[j]], {{i}, {j}}],
    φ = Delete[λT[[i]], {{i}, {j}}], ψ = Delete[λT[[j]], {{i}, {j}}],
    Ξ = If[Length@L == 2, {{}}, Delete[Delete[λ, {{i}, {j}}]T, {{i}, {j}}]T],
    Γ[
      Apart[β ω],
      Apart@Join[{Join[{γ +  $\frac{\alpha \delta}{\beta}$ ], ε +  $\frac{\delta \theta}{\beta}$ }], Join[{φ +  $\frac{\alpha \psi}{\beta}$ ],
        If[Ξ == {{}}, {{}}, (Ξ +  $\frac{\{\psi\}^T \cdot \{\theta\}}{\beta}$ )T]}]T][[Ordering@S]]T[[Ordering@S]]T,
      Union@S
    ]];
MS{a__}→c@Γ@i__ := Module[{x = (Γ@i /. Table[Tj → Tc, {j, {a}}])}, j],
  For[j = 1, j < Length@{a}, j++, x = R{a}[[j]], {a}[[j+1]] → If[j+1 == Length@{a}, c, {a}[[j+1]]]@x;];
  x];
Sa,b→c[Γ[...]] := The Actual Computation;
S{a}→c[] := A renaming op;
S{a,b,rest__}→c[γT] := γ // () // Sa,b→c // S{c,rest}→c;
MRra,b := Γ[1, ( $\begin{matrix} 1 & 1 - T_a \\ 0 & T_a \end{matrix}$ ), {a, b}];
MRla,b := MRra,b /. Ta →  $\frac{1}{T_a}$ ;
M@K_ := ToR@K /. {Rri → MRri, Rli → MRli}; (* Rl, Rr → Xm, Xp; MR → R *)

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ToX@K_ := Module[{x = If[Count[ToR@K, (Rr | Rl)_] == 0, 2, 2 Length@K]},
  ToR@K /. {Rr_a_, b_ :=> X_b, Mod[a, x]+1, Mod[b, x]+1, a, Rl_a_, b_ :=> X_b, a, Mod[b, x]+1, Mod[a, x]+1}}];
ToR@K_ := K /. {Rr@i_ :=> Rr_i, Rl@i_ :=> Rl_i, X@i_ :=> X_i,
  X_i_, j_, k_, l_ :=> If[(j == l + 1 || j == 1 && l != 2 || k == l) && j != k, Rr_l, i, Rl_j, i]};
MA@K_ := Module[{q = Apart@Module[
  {p = Module[{x = If[MatrixQ@K, K, M@K]}, If[Length@x == 2 && Length@x[[1]] == 2,
    x[[1]][[1]] /. T_ -> t, 0]}], p t $\frac{\text{Exponent}[p, \frac{1}{t}] - \text{Exponent}[p, t]}{2}$ ]}],
  If[IntegerQ[q /. t -> 1] && PolynomialQ[q /. ti_Integer -> t, t],
    q If[Sign@Coefficient[q, t, 0] >= 0, 1, -1], 0]];
B@K_ := SModule[{v = {}}, ToR@K /. (Rr | Rl)_a_ :=> (v = Union[v, {a}]; v) -> 1 @K;
B@Gamma[i_, L_] := S_{L-1} @ Gamma[i, L];
A@K_ := MA@B@ToR@K;
A@X_ := 1;
A@X[_] := 1;
A@Gamma[i_] := MA@B@Gamma[i];
A@0 := 0;
J@K_ := Module[{p = Apart[ $\frac{t^{\frac{3}{4}(\text{Count}[\text{ToR@K}, \text{Rr}_] - \text{Count}[\text{ToR@K}, \text{Rl}_])}}{t^{1/2} + t^{-1/2}}$ ]}],
  Module[{v = {}}, Module[{k = ToX@K, r = X_i_, j_, k_, l_ :=> (v = Union[v, {i, j, k, l}];
 $\frac{P[i, j] P[k, l]}{t^{\frac{1}{4}}} + t^{\frac{1}{4}} P[i, l] P[j, k]$ )}, Module[{x = (k[[1]] /. r)  $\frac{k}{k[[1]}}$ },
  Do[x = Module[{v = x[[1]] x[[1 + Ordering[Length[Complement[#, v]]] & @
    Module[{s = {}}, AppendTo[s, List@@#[[2] ;;]]; & /@ x[[2] ;;];
    s]][[1]]]}, Expand[v /. r]  $\frac{x}{v}$ ], {Length@x - 2}];
  Expand[x /. r]]]]], If[IntegerQ[p /. {t -> 1, P@_ -> infinity}] &&
  PolynomialQ[p /. ti_Integer -> t, t], If[Sign@Coefficient[p, t, 0] >= 0, 1, -1] p /.
  t -> tIf[Sign@Differences[Module[{i=0}, While[!PolynomialQ[Apart[# t^i], t], i++]; i] & /@ {p, p /. t ->  $\frac{1}{t}}$ ]][[1]] >= 0, 1, -1],
  0]];
J@X_ := 1;
J@X[_] := 1;
J@0 := 0;
K@_ := 0;
V :=
  Prepend[Module[{R = {61, 88, 89, 820, 927, 941, 946, 103, 1022, 1035, 1042, 1048, 1075, 1087,
    1099, 10123, 10129, 10137, 10140, 10153, 10155}}},
    {#, KnotData[List@@#, "AlexanderPolynomial"]@t === A@K@#,
  MemberQ[Table[KnotData[List@@#, "JonesPolynomial"]@i, {i, {t,  $\frac{1}{t}}$ }}],
  J@K@#}] & /@ R], {"", "Alexander", "Jones"}]^T;

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( \*K@6<sub>1</sub> = X<sub>1,8,2,9</sub>X<sub>4,16,5,15</sub>X<sub>5,2,6,3</sub>X<sub>6,12,7,11</sub>X<sub>9,16,10,1</sub>X<sub>12,8,13,7</sub>X<sub>13,10,14,11</sub>X<sub>14,4,15,3</sub> ;  
 K@8<sub>8</sub> = X<sub>1,14,2,15</sub>X<sub>3,26,4,27</sub>X<sub>6,16,7,15</sub>X<sub>8,30,9,29</sub>X<sub>9,20,10,21</sub>X<sub>10,6,11,5</sub>X<sub>11,2,12,3</sub>X<sub>12,24,13,23</sub>  
 X<sub>17,30,18,31</sub>X<sub>19,16,20,17</sub>X<sub>22,26,23,25</sub>X<sub>24,14,25,13</sub>X<sub>27,4,28,5</sub>X<sub>28,22,29,21</sub>X<sub>31,18,32,19</sub>X<sub>32,8,1,7</sub> ;  
 K@8<sub>9</sub> = X<sub>1,27,2,26</sub>X<sub>2,12,3,11</sub>X<sub>4,27,5,28</sub>X<sub>7,16,8,17</sub>X<sub>8,31,9,32</sub>X<sub>12,4,13,3</sub>X<sub>13,24,14,25</sub>X<sub>14,22,15,21</sub>X<sub>15,6,16,7</sub>  
 X<sub>19,33,20,32</sub>X<sub>20,18,21,17</sub>X<sub>23,29,24,28</sub>X<sub>25,10,26,11</sub>X<sub>29,23,30,22</sub>X<sub>30,5,31,6</sub>X<sub>33,19,34,18</sub>X<sub>34,9,1,10</sub> ;  
 K@8<sub>20</sub> = X<sub>2,15,3,16</sub>X<sub>3,10,4,11</sub>X<sub>5,18,6,19</sub>X<sub>7,4,8,5</sub>X<sub>8,14,9,13</sub>X<sub>12,18,13,17</sub>  
 X<sub>14,10,15,9</sub>X<sub>16,1,17,2</sub>X<sub>19,6,20,7</sub>X<sub>20,12,1,11</sub> ;  
 K@9<sub>27</sub> = X<sub>5,21,6,20</sub>X<sub>7,4,8,5</sub>X<sub>10,29,11,30</sub>X<sub>12,48,13,47</sub>X<sub>13,27,14,26</sub>X<sub>16,2,17,1</sub>X<sub>17,31,18,30</sub>X<sub>18,41,19,42</sub>  
 X<sub>19,7,20,6</sub>X<sub>22,9,23,10</sub>X<sub>23,39,24,38</sub>X<sub>24,33,25,34</sub>X<sub>25,15,26,14</sub>X<sub>31,2,32,3</sub>X<sub>34,27,35,28</sub>X<sub>35,48,36,49</sub>X<sub>37,29,38,28</sub>  
 X<sub>40,4,41,3</sub>X<sub>42,21,43,22</sub>X<sub>43,8,44,9</sub>X<sub>44,40,45,39</sub>X<sub>45,32,46,33</sub>X<sub>46,16,47,15</sub>X<sub>49,36,50,37</sub>X<sub>50,12,1,11</sub> ;  
 K@9<sub>41</sub> = X<sub>2,18,3,17</sub>X<sub>3,42,4,43</sub>X<sub>6,14,7,13</sub>X<sub>8,40,9,39</sub>X<sub>9,20,10,21</sub>X<sub>11,38,12,39</sub>X<sub>15,32,16,33</sub>X<sub>16,6,17,5</sub>  
 X<sub>21,10,22,11</sub>X<sub>22,28,23,27</sub>X<sub>23,36,24,37</sub>X<sub>24,2,25,1</sub>X<sub>26,38,27,37</sub>X<sub>28,20,29,19</sub>X<sub>29,40,30,41</sub>X<sub>31,14,32,15</sub>  
 X<sub>34,42,35,41</sub>X<sub>35,18,36,19</sub>X<sub>43,4,44,5</sub>X<sub>44,34,45,33</sub>X<sub>45,30,46,31</sub>X<sub>46,8,47,7</sub>X<sub>47,12,48,13</sub>X<sub>48,26,1,25</sub> ;  
 K@9<sub>46</sub> = X<sub>3,18,4,19</sub>X<sub>4,8,5,7</sub>X<sub>5,12,6,13</sub>X<sub>8,2,9,1</sub>X<sub>10,15,11,16</sub>X<sub>13,6,14,7</sub>  
 X<sub>14,20,15,19</sub>X<sub>16,9,17,10</sub>X<sub>17,2,18,3</sub>X<sub>20,12,1,11</sub> ;  
 K@10<sub>3</sub> = X<sub>2,31,3,32</sub>X<sub>4,29,5,30</sub>X<sub>5,20,6,21</sub>X<sub>8,36,9,35</sub>X<sub>9,16,10,17</sub>X<sub>12,40,13,39</sub>X<sub>13,10,14,11</sub>  
 X<sub>14,24,15,23</sub>X<sub>17,6,18,7</sub>X<sub>18,28,19,27</sub>X<sub>21,40,22,1</sub>X<sub>24,16,25,15</sub>X<sub>25,36,26,37</sub>  
 X<sub>28,20,29,19</sub>X<sub>30,3,31,4</sub>X<sub>32,1,33,2</sub>X<sub>33,26,34,27</sub>X<sub>34,8,35,7</sub>X<sub>37,22,38,23</sub>X<sub>38,12,39,11</sub> ;  
 K@10<sub>22</sub> = X<sub>1,24,2,25</sub>X<sub>2,46,3,45</sub>X<sub>9,20,10,21</sub>X<sub>10,50,11,49</sub>X<sub>11,28,12,29</sub>X<sub>12,42,13,41</sub>X<sub>16,6,17,5</sub>X<sub>18,32,19,31</sub>X<sub>19,8,20,9</sub>  
 X<sub>21,30,22,31</sub>X<sub>23,4,24,5</sub>X<sub>26,40,27,39</sub>X<sub>27,14,28,15</sub>X<sub>33,52,34,53</sub>X<sub>34,18,35,17</sub>X<sub>35,22,36,23</sub>X<sub>36,48,37,47</sub>X<sub>37,44,38,45</sub>  
 X<sub>38,26,39,25</sub>X<sub>42,14,43,13</sub>X<sub>43,40,44,41</sub>X<sub>46,4,47,3</sub>X<sub>48,30,49,29</sub>X<sub>50,8,51,7</sub>X<sub>51,32,52,33</sub>X<sub>53,6,54,7</sub>X<sub>54,16,1,15</sub> ;  
 K@10<sub>35</sub> = X<sub>3,24,4,25</sub>X<sub>4,38,5,37</sub>X<sub>7,42,8,43</sub>X<sub>8,20,9,19</sub>X<sub>9,16,10,17</sub>X<sub>10,46,11,45</sub>X<sub>14,30,15,29</sub>X<sub>15,12,16,13</sub>  
 X<sub>17,32,18,33</sub>X<sub>20,2,21,1</sub>X<sub>22,36,23,35</sub>X<sub>23,6,24,7</sub>X<sub>25,40,26,41</sub>X<sub>26,22,27,21</sub>X<sub>27,48,28,1</sub>X<sub>28,14,29,13</sub>  
 X<sub>33,18,34,19</sub>X<sub>34,44,35,43</sub>X<sub>38,6,39,5</sub>X<sub>39,36,40,37</sub>X<sub>41,2,42,3</sub>X<sub>44,32,45,31</sub>X<sub>46,12,47,11</sub>X<sub>47,30,48,31</sub> ;  
 K@10<sub>42</sub> = X<sub>1,16,2,17</sub>X<sub>2,50,3,49</sub>X<sub>3,63,4,62</sub>X<sub>5,61,6,60</sub>X<sub>7,59,8,58</sub>X<sub>9,36,10,37</sub>X<sub>12,66,13,65</sub>X<sub>14,30,15,29</sub>  
 X<sub>15,68,16,69</sub>X<sub>17,38,18,39</sub>X<sub>19,70,20,71</sub>X<sub>22,40,23,39</sub>X<sub>24,74,25,73</sub>X<sub>25,44,26,45</sub>X<sub>26,22,27,21</sub>  
 X<sub>27,18,28,19</sub>X<sub>28,48,29,47</sub>X<sub>31,52,32,53</sub>X<sub>32,14,33,13</sub>X<sub>33,10,34,11</sub>X<sub>34,56,35,55</sub>X<sub>41,74,42,75</sub>  
 X<sub>43,40,44,41</sub>X<sub>46,70,47,69</sub>X<sub>48,38,49,37</sub>X<sub>50,68,51,67</sub>X<sub>51,30,52,31</sub>X<sub>53,66,54,67</sub>X<sub>56,36,57,35</sub>X<sub>57,9,58,8</sub>  
 X<sub>59,7,60,6</sub>X<sub>61,5,62,4</sub>X<sub>63,54,64,55</sub>X<sub>64,12,65,11</sub>X<sub>71,20,72,21</sub>X<sub>72,46,73,45</sub>X<sub>75,42,76,43</sub>X<sub>76,24,1,23</sub> ;  
 K@10<sub>48</sub> = X<sub>2,22,3,21</sub>X<sub>5,1,6,50</sub>X<sub>7,16,8,17</sub>X<sub>8,47,9,48</sub>X<sub>11,14,12,15</sub>X<sub>12,45,13,46</sub>X<sub>18,34,19,33</sub>X<sub>19,6,20,7</sub>X<sub>22,4,23,3</sub>  
 X<sub>23,36,24,37</sub>X<sub>24,30,25,29</sub>X<sub>25,10,26,11</sub>X<sub>27,47,28,46</sub>X<sub>28,16,29,15</sub>X<sub>31,49,32,48</sub>X<sub>32,18,33,17</sub>X<sub>34,49,35,50</sub>  
 X<sub>37,20,38,21</sub>X<sub>38,1,39,2</sub>X<sub>39,5,40,4</sub>X<sub>40,35,41,36</sub>X<sub>41,31,42,30</sub>X<sub>42,9,43,10</sub>X<sub>43,27,44,26</sub>X<sub>44,13,45,14</sub> ;  
 K@10<sub>75</sub> = X<sub>2,30,3,29</sub>X<sub>4,52,5,51</sub>X<sub>5,28,6,29</sub>X<sub>8,56,9,55</sub>X<sub>10,22,11,21</sub>X<sub>11,58,12,59</sub>X<sub>13,20,14,21</sub>X<sub>16,64,17,63</sub>  
 X<sub>17,14,18,15</sub>X<sub>18,36,19,35</sub>X<sub>23,40,24,41</sub>X<sub>24,10,25,9</sub>X<sub>25,6,26,7</sub>X<sub>26,44,27,43</sub>X<sub>31,48,32,49</sub>X<sub>32,2,33,1</sub>  
 X<sub>33,64,34,1</sub>X<sub>36,20,37,19</sub>X<sub>38,58,39,57</sub>X<sub>39,22,40,23</sub>X<sub>41,56,42,57</sub>X<sub>44,28,45,27</sub>X<sub>45,52,46,53</sub>X<sub>47,30,48,31</sub>  
 X<sub>49,46,50,47</sub>X<sub>50,4,51,3</sub>X<sub>53,42,54,43</sub>X<sub>54,8,55,7</sub>X<sub>59,12,60,13</sub>X<sub>60,38,61,37</sub>X<sub>61,34,62,35</sub>X<sub>62,16,63,15</sub> ;  
 K@10<sub>87</sub> = X<sub>1,55,2,54</sub>X<sub>2,25,3,26</sub>X<sub>4,59,5,60</sub>X<sub>6,35,7,36</sub>X<sub>9,59,10,58</sub>X<sub>11,25,12,24</sub>X<sub>12,55,13,56</sub>X<sub>15,31,16,30</sub>X<sub>17,1,18,70</sub>  
 X<sub>18,27,19,28</sub>X<sub>19,53,20,52</sub>X<sub>20,3,21,4</sub>X<sub>21,11,22,10</sub>X<sub>22,45,23,46</sub>X<sub>31,15,32,14</sub>X<sub>32,41,33,42</sub>X<sub>33,49,34,48</sub>X<sub>34,7,35,8</sub>  
 X<sub>37,29,38,28</sub>X<sub>38,69,39,70</sub>X<sub>40,29,41,30</sub>X<sub>43,57,44,56</sub>X<sub>44,23,45,24</sub>X<sub>46,57,47,58</sub>X<sub>49,37,50,36</sub>X<sub>51,61,52,60</sub>  
 X<sub>53,27,54,26</sub>X<sub>61,51,62,50</sub>X<sub>62,5,63,6</sub>X<sub>63,9,64,8</sub>X<sub>64,47,65,48</sub>X<sub>65,43,66,42</sub>X<sub>66,13,67,14</sub>X<sub>67,17,68,16</sub>X<sub>68,39,69,40</sub> ;  
 K@10<sub>99</sub> = X<sub>1,26,2,27</sub>X<sub>3,30,4,31</sub>X<sub>4,24,5,23</sub>X<sub>5,58,6,59</sub>X<sub>7,22,8,23</sub>X<sub>10,72,11,71</sub>X<sub>12,38,13,37</sub>X<sub>13,66,14,67</sub>X<sub>15,36,16,37</sub>  
 X<sub>17,70,18,71</sub>X<sub>19,8,20,9</sub>X<sub>20,50,21,49</sub>X<sub>27,2,28,3</sub>X<sub>28,56,29,55</sub>X<sub>31,46,32,47</sub>X<sub>32,12,33,11</sub>X<sub>33,16,34,17</sub>X<sub>34,42,35,41</sub>

$X_{40,70,41,69} X_{42,36,43,35} X_{44,66,45,65} X_{45,38,46,39} X_{47,72,48,1} X_{50,22,51,21} X_{52,58,53,57} X_{53,24,54,25} X_{54,30,55,29}$   
 $X_{56,26,57,25} X_{59,6,60,7} X_{60,52,61,51} X_{61,48,62,49} X_{62,10,63,9} X_{63,18,64,19} X_{64,40,65,39} X_{67,14,68,15} X_{68,44,69,43}$  ;  
 $K@10_{123} = X_2, 71, 3, 72 X_3, 28, 4, 29 X_8, 80, 9, 79 X_{10}, 5, 11, 6 X_{11}, 69, 12, 68 X_{12}, 46, 13, 45 X_{14}, 82, 15, 81 X_{15}, 40, 16, 41$   
 $X_{17}, 88, 18, 89 X_{20}, 30, 21, 29 X_{22}, 86, 23, 85 X_{24}, 38, 25, 37 X_{25}, 84, 26, 85 X_{31}, 54, 32, 55 X_{32}, 20, 33, 19$   
 $X_{33}, 16, 34, 17 X_{34}, 58, 35, 57 X_{35}, 50, 36, 51 X_{36}, 24, 37, 23 X_{41}, 64, 42, 65 X_{42}, 10, 43, 9 X_{43}, 6, 44, 7 X_{44}, 68, 45, 67$   
 $X_{48}, 84, 49, 83 X_{49}, 38, 50, 39 X_{51}, 86, 52, 87 X_{53}, 30, 54, 31 X_{56}, 88, 57, 87 X_{58}, 40, 59, 39 X_{59}, 82, 60, 83$   
 $X_{61}, 46, 62, 47 X_{62}, 69, 63, 70 X_{63}, 5, 64, 4 X_{65}, 80, 66, 81 X_{70}, 28, 71, 27 X_{72}, 1, 73, 2 X_{73}, 26, 74, 27 X_{74}, 48, 75, 47$   
 $X_{75}, 60, 76, 61 X_{76}, 14, 77, 13 X_{77}, 66, 78, 67 X_{78}, 8, 79, 7 X_{89}, 18, 90, 19 X_{90}, 56, 91, 55 X_{91}, 52, 92, 53 X_{92}, 22, 1, 21$  ;  
 $K@10_{129} = X_2, 27, 3, 28 X_3, 18, 4, 19 X_6, 32, 7, 31 X_7, 14, 8, 15 X_9, 34, 10, 35 X_{11}, 8, 12, 9 X_{12}, 22, 13, 21 X_{15}, 4, 16, 5 X_{16}, 26, 17, 25$   
 $X_{20}, 34, 21, 33 X_{22}, 14, 23, 13 X_{23}, 32, 24, 33 X_{26}, 18, 27, 17 X_{28}, 1, 29, 2 X_{29}, 24, 30, 25 X_{30}, 6, 31, 5 X_{35}, 10, 36, 11 X_{36}, 20, 1, 19$  ;  
 $K@10_{137} = X_2, 27, 3, 28 X_3, 18, 4, 19 X_6, 32, 7, 31 X_8, 12, 9, 11 X_9, 34, 10, 35 X_{13}, 22, 14, 23 X_{14}, 8, 15, 7 X_{15}, 4, 16, 5 X_{16}, 26, 17, 25$   
 $X_{20}, 34, 21, 33 X_{21}, 12, 22, 13 X_{23}, 32, 24, 33 X_{26}, 18, 27, 17 X_{28}, 1, 29, 2 X_{29}, 24, 30, 25 X_{30}, 6, 31, 5 X_{35}, 10, 36, 11 X_{36}, 20, 1, 19$  ;  
 $K@10_{140} = X_1, 19, 2, 18 X_3, 17, 4, 16 X_4, 10, 5, 9 X_7, 1, 8, 22 X_{10}, 6, 11, 5 X_{11}, 14, 12, 15$   
 $X_{12}, 21, 13, 22 X_{15}, 8, 16, 9 X_{17}, 3, 18, 2 X_{19}, 7, 20, 6 X_{20}, 13, 21, 14$  ;  
 $K@10_{153} = X_1, 14, 2, 15 X_3, 10, 4, 11 X_5, 22, 6, 23 X_7, 4, 8, 5 X_8, 18, 9, 17 X_{11}, 2, 12, 3$   
 $X_{12}, 20, 13, 19 X_{16}, 22, 17, 21 X_{18}, 10, 19, 9 X_{20}, 14, 21, 13 X_{23}, 6, 24, 7 X_{24}, 16, 1, 15$  ;  
 $K@10_{155} = X_1, 29, 2, 28 X_3, 16, 4, 17 X_6, 32, 7, 31 X_8, 18, 9, 17 X_{10}, 34, 11, 33 X_{11}, 22, 12, 23 X_{12}, 8, 13, 7 X_{13}, 4, 14, 5 X_{14}, 26, 15, 25$   
 $X_{19}, 34, 20, 35 X_{21}, 18, 22, 19 X_{23}, 32, 24, 33 X_{26}, 16, 27, 15 X_{27}, 3, 28, 2 X_{29}, 24, 30, 25 X_{30}, 6, 31, 5 X_{35}, 20, 36, 21 X_{36}, 10, 1, 9$  ; \* )  
  
 $K@6_1 = X_1, 7, 2, 6 X_4, 11, 5, 12 X_7, 1, 8, 14 X_9, 3, 10, 2 X_{10}, 5, 11, 6 X_{12}, 3, 13, 4 X_{13}, 9, 14, 8$  ;  
 $K@8_8 = X_1, 9, 2, 8 X_3, 1, 4, 18 X_5, 11, 6, 10 X_6, 13, 7, 14 X_9, 3, 10, 2 X_{12}, 15, 13, 16 X_{14}, 7, 15, 8 X_{16}, 11, 17, 12 X_{17}, 5, 18, 4$  ;  
 $K@8_9 = X_1, 8, 2, 9 X_3, 11, 4, 10 X_6, 19, 7, 20 X_9, 16, 10, 17$   
 $X_{11}, 19, 12, 18 X_{12}, 6, 13, 5 X_{14}, 7, 15, 8 X_{15}, 3, 16, 2 X_{17}, 4, 18, 5 X_{20}, 14, 1, 13$  ;  
 $K@8_{20} = X_1, 6, 2, 7 X_3, 11, 4, 10 X_5, 16, 6, 1 X_8, 14, 9, 13 X_{11}, 3, 12, 2 X_{12}, 8, 13, 7 X_{14}, 10, 15, 9 X_{15}, 4, 16, 5$  ;  
 $K@9_{27} = X_2, 24, 3, 23 X_5, 20, 6, 21 X_7, 15, 8, 14 X_8, 1, 9, 2 X_{10}, 20, 11, 19$   
 $X_{11}, 5, 12, 4 X_{13}, 16, 14, 17 X_{15}, 7, 16, 6 X_{18}, 3, 19, 4 X_{21}, 13, 22, 12 X_{22}, 17, 23, 18 X_{24}, 9, 1, 10$  ;  
 $K@9_{41} = X_2, 17, 3, 18 X_3, 21, 4, 20 X_6, 13, 7, 14 X_7, 24, 8, 25 X_9, 19, 10, 18 X_{10}, 1, 11, 2 X_{12}, 24, 13, 23$   
 $X_{14}, 5, 15, 6 X_{16}, 27, 17, 28 X_{19}, 9, 20, 8 X_{21}, 27, 22, 26 X_{22}, 16, 23, 15 X_{25}, 4, 26, 5 X_{28}, 11, 1, 12$  ;  
 $K@9_{46} = X_1, 9, 2, 8 X_3, 13, 4, 12 X_6, 15, 7, 16 X_9, 1, 10, 18 X_{11}, 5, 12, 4 X_{13}, 3, 14, 2 X_{14}, 7, 15, 8 X_{16}, 5, 17, 6 X_{17}, 11, 18, 10$  ;  
 $K@10_3 = X_2, 11, 3, 12 X_3, 16, 4, 17 X_5, 14, 6, 15 X_8, 22, 9, 21$   
 $X_{10}, 20, 11, 19 X_{13}, 6, 14, 7 X_{15}, 4, 16, 5 X_{17}, 13, 18, 12 X_{18}, 1, 19, 2 X_{20}, 10, 21, 9 X_{22}, 8, 1, 7$  ;  
 $K@10_{22} = X_2, 12, 3, 11 X_5, 18, 6, 19 X_7, 16, 8, 17 X_9, 5, 10, 4 X_{10}, 19, 11, 20 X_{12}, 22, 13, 21$   
 $X_{14}, 2, 15, 1 X_{15}, 6, 16, 7 X_{17}, 8, 18, 9 X_{20}, 3, 21, 4 X_{22}, 14, 1, 13$  ;  
 $K@10_{35} = X_1, 6, 2, 7 X_3, 11, 4, 10 X_4, 19, 5, 20 X_7, 14, 8, 15 X_9, 12, 10, 13 X_{11}, 3, 12, 2$   
 $X_{13}, 8, 14, 9 X_{16}, 22, 17, 21 X_{18}, 5, 19, 6 X_{20}, 18, 21, 17 X_{22}, 16, 1, 15$  ;  
 $K@10_{42} = X_2, 28, 3, 27 X_4, 9, 5, 10 X_5, 24, 6, 25 X_8, 18, 9, 17 X_{11}, 14, 12, 15 X_{13}, 22, 14, 23 X_{15}, 27, 16, 26$   
 $X_{16}, 3, 17, 4 X_{18}, 8, 19, 7 X_{20}, 2, 21, 1 X_{21}, 12, 22, 13 X_{23}, 6, 24, 7 X_{25}, 11, 26, 10 X_{28}, 20, 1, 19$  ;  
 $K@10_{48} = X_1, 6, 2, 7 X_3, 11, 4, 10 X_4, 21, 5, 22 X_7, 17, 8, 16 X_9, 19, 10, 18 X_{12}, 6, 13, 5$   
 $X_{14}, 23, 15, 24 X_{17}, 9, 18, 8 X_{19}, 2, 20, 3 X_{20}, 12, 21, 11 X_{22}, 13, 23, 14 X_{24}, 15, 1, 16$  ;  
 $K@10_{75} = X_2, 30, 3, 29 X_4, 9, 5, 10 X_5, 26, 6, 27 X_8, 18, 9, 17 X_{11}, 14, 12, 15 X_{13}, 21, 14, 20 X_{15}, 29, 16, 28$   
 $X_{16}, 3, 17, 4 X_{19}, 7, 20, 6 X_{21}, 13, 22, 12 X_{22}, 1, 23, 2 X_{24}, 7, 25, 8 X_{25}, 19, 26, 18 X_{27}, 11, 28, 10 X_{30}, 23, 1, 24$  ;  
 $K@10_{87} = X_2, 13, 3, 14 X_3, 17, 4, 16 X_6, 19, 7, 20 X_9, 27, 10, 26 X_{10}, 5, 11, 6 X_{12}, 29, 13, 30 X_{15}, 24, 16, 25$   
 $X_{17}, 29, 18, 28 X_{18}, 12, 19, 11 X_{20}, 7, 21, 8 X_{22}, 2, 23, 1 X_{23}, 14, 24, 15 X_{25}, 9, 26, 8 X_{27}, 4, 28, 5 X_{30}, 22, 1, 21$  ;

```

K@1022 = {{Strand[1, 2, 3, 4], Strand[5, 6, 7, 8], Strand[9, 10], Strand[...]},
X2,12,3,11 X5,18,6,19 X7,16,8,17 X9,5,10,4 X10,19,11,20
X12,22,13,21 X14,2,15,1 X15,6,16,7 X17,8,18,9 X20,3,21,4 X22,14,1,13};

```

```

A = Table[10 i + j, {i, 0, 9}, {j, 0, 9}]

```

```

( 0  1  2  3  4  5  6  7  8  9 )
(10 11 12 13 14 15 16 17 18 19 )
(20 21 22 23 24 25 26 27 28 29 )
(30 31 32 33 34 35 36 37 38 39 )
(40 41 42 43 44 45 46 47 48 49 )
(50 51 52 53 54 55 56 57 58 59 )
(60 61 62 63 64 65 66 67 68 69 )
(70 71 72 73 74 75 76 77 78 79 )
(80 81 82 83 84 85 86 87 88 89 )
(90 91 92 93 94 95 96 97 98 99 )

```

```

A[[{1, 3, 2}, {7, 6, 5}]]

```

```

( 6  5  4 )
(26 25 24 )
(16 15 14 )

```