QUIPU AS 41

Museum Identification: No. V17/559 (Museo Nacional, Lima, Peru)

Main cord: color

$ \quad 0.5 cm: group of 4 pendant cords (1-4), then space of 6.0 cm.

7.5 cm: group of 4 pendant cords (5-8), then space of 1.0 cm.

9.0 cm: group of 2 pendant cords (9-10), then space of 0.5 cm.

10.0 cm: group of 4 pendant cords (11-14), then space of 0.5 cm.

11.5 cm: group of 4 pendant cords (15-18), then space of 0.5 cm.

13.0 cm: group of 4 pendant cords (19-22), then space of 0.5 cm.

14.5 cm: group of 3 pendant cords (23-25), then space of 1.0 cm.

16.5 cm: group of 3 pendant cords (26-28), then space of 1.0 cm.

18.0 cm: group of 3 pendant cords (29-31), then space of 1.0 cm.

19.5 cm: pendant cord (32), then space of 9.5 cm.

29.0 cm: end ¢

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
1	1s(7.0);8L(12.0)	27.0¢	LD	18	2:3.0,4.0
1s1	1s(10.5)	17.0¢	LD	10	2:5.5,6.5
1s1s1	2L(11.0)	15.0¢	W	2	
1s1s2	9L(3.5)	9.5¢	MB	9	
1s2	7L(9.5)	19.0¢	LD	7	2:3.5
1s2s1	1s(4.0)	6.0b	RL	10	
1s2s2	3L(3.5)	7.5¢	MB	3	
2	1s(6.5);8L(13.0)	29.0¢	MB	18	1:6.0
2s1	2L(4.0)	9.0¢	W	2	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
3	3s(4.5)	37.5¢	RL	300	1:2.5
3s1	1s(2.5)	26.5¢	RL	100	
4	4s(4.0);6s(9.5)	31.5¢	RL:W	460	1:2.5
4s1	3s(6.5)	10.5¢	LD:W	30	
5	5L(10.0)	35.0¢	LD	5	1:0.0
5s1	2L(5.0)	7.0	RL	2	
6	5s(7.0)	29.0¢	RL	50	1:5.5
6s1	3s(1.0)	12.5¢	RL	30	
7	7L(12.0)	22.0¢	MB	7	
8	7s(6.5)	22.5¢	LD:W	70	1:6.0
8s1	3s(2.0)	16.0¢	RL	30	
9	1E(16.0)	35.0¢	LD	1	1:11.5
9s1	1E(4.5)	12.0¢	W	1	
10	7s(6.5)	22.5¢	RL	70	1:5.0
10s1	3s(0.5)	8.5¢	LD:W	30	
11	9L(11.5)	29.0¢	LD	9	
12	4L(13.0)	26.0¢	RL	4	
13	8L(8.5)	29.5¢	MB	8	1:1.5
13s1	2L(10.0)	23.0	W	2	
14	7s(6.0)	18.0	LD:W	70	1:5.0
14s1	2s(2.0)	16.0¢	RL	20	
15	5L(13.0)	25.5¢	LD	5	1:8.0
15s1	3L(4.0)	9.0	RL	3	
16	2s(5.5)	27.5¢	RL	20	
17	3L(11.0)	22.0	MB	3	

Cord	Knots (no., type, position)	Length	Color	Value	Subsidiaries (no., position)
18	4s(6.0)	26.0¢	LD:W	40	
19	8L(13.0)	32.0¢	LD	8	1:10.0
19s1	2L(3.5)	10.5	MB	2	
20	3L(12.0)	18.0	RL	3	
21	6s(6.0)	27.0¢	W	60	
22	7s(6.0)	23.0¢	RL:W	70	
23	7L(11.5)	33.5¢	LD	7	2:7.0,8.0
23s1	3L(6.5)	13.5¢	RL	3	
23s2	4L(4.5)	8.5¢	MB	4	
24	8s(5.0)	24.0¢	RL:W	80	1:0.0
24s1	5s(4.5)	12.5¢	RL:W	50	
25	5s(4.5)	23.5	LD:W	50	
26	4s(5.0)	18.0	RL:W	40	
27	1s(2.0);3s(5.5)	13.5	LD:W	130	
28	1s(2.0)	35.0¢	RL:W	100	
29	-	16.0	LD	0	1:7.5
29s1	-	9.0	MB	0	
30	1s(4.5)	17.5	RL	10	
31	-	2.5b	LD:W	?	
32	1E(20.0)	31.0¢	LD	1	2:13.0 - 13.5
32s1	-	0.5b	MB	?	
32s2	1s(4.0)	9.0¢	RL:W	10	

Observations

1. By spacing there are 10 groups of 4,4,2,4,4,4,3,3,3,1 pendants. There is some consistancy of color pattern. LD appears in 9 of the 10 groups in position 1 and in no other positions. Groups 2, 4, and 5 have the same color pattern: LD, RL, MD, LD:W. Group 1 is similar, but with the colors of positions 2 and 3 reversed and RL:W instead of LD:W. The association of position 3 in Group 2 with position 2 in other groups, and of RL:W with LD:W, is further seen when examining numerical relationships.

2. The values in Group 1 are the sums of the values in the subsequent groups. Where pendants of the same color are in similar positions in different groups, their values are related. However, the sum seems to be more related to pendant color than position. While other sum statements might be as valid, one which accounts for most values follows. (Note: P_{ij} is the value of the jth pendant in the ith group. P_{ijsk} is the value of the kth subsidiary on the jth pendant in the ith group.)

$$P_{11} + P_{11s1} + P_{11s2} = P_{21} + P_{31} + P_{41} + P_{51} + P_{61} + P_{71} \qquad \text{all LD}$$

$$P_{12} = P_{23} + P_{43} + P_{53} \qquad \text{all MB}$$

$$P_{12s1} = P_{43s1} \qquad \text{all W}$$

$$P_{13s1} = P_{52} + P_{22s1} + P_{24s1} + P_{44s1} \qquad \text{all RL}$$

$$P_{13} = \overbrace{P_{22} + P_{32} + P_{92}}^{RL} + \overbrace{P_{63}}^{W} + \overbrace{P_{24} + P_{54}}^{LD:W}$$

$$P_{14s1} = P_{32s1} \qquad \text{all LD:W}$$

$$P_{14} = \overbrace{P_{22}}^{LD:W} + \overbrace{P_{73}}^{LD-W} + \overbrace{P_{81} + P_{72} + P_{72s1} + P_{83} + P_{64}}^{RL:W}$$

Inexact sums on subsidiaries of position 1 in Group 1:

$P_{11s1s1} + P_{11s2s2}$ exceeds $P_{61s1} + P_{71s1}$ by 6   all MB

P_{11s1s2} exceeds P_{31s1} by 1   all W

P_{11s2s1} exceeds $P_{21s1} + P_{51s1} + P_{71s1}$ by 2   all RL

Seven values in groups 2-10 unaccounted for in sums:

$$\overbrace{P_{42},\ P_{62}}^{\text{RL}},\quad \overbrace{P_{82}}^{\text{LD:W}},\quad \overbrace{P_{10,1}}^{\text{LD}},\quad \overbrace{P_{10,1s2}}^{\text{RL:W}};\ \text{broken values unknown}\ \overbrace{P_{93}}^{\text{LD:W}},\quad \overbrace{P_{10,1s1}}^{\text{MB}}$$