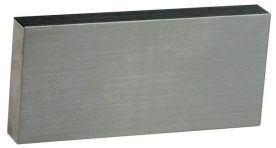
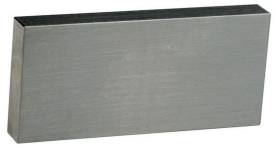
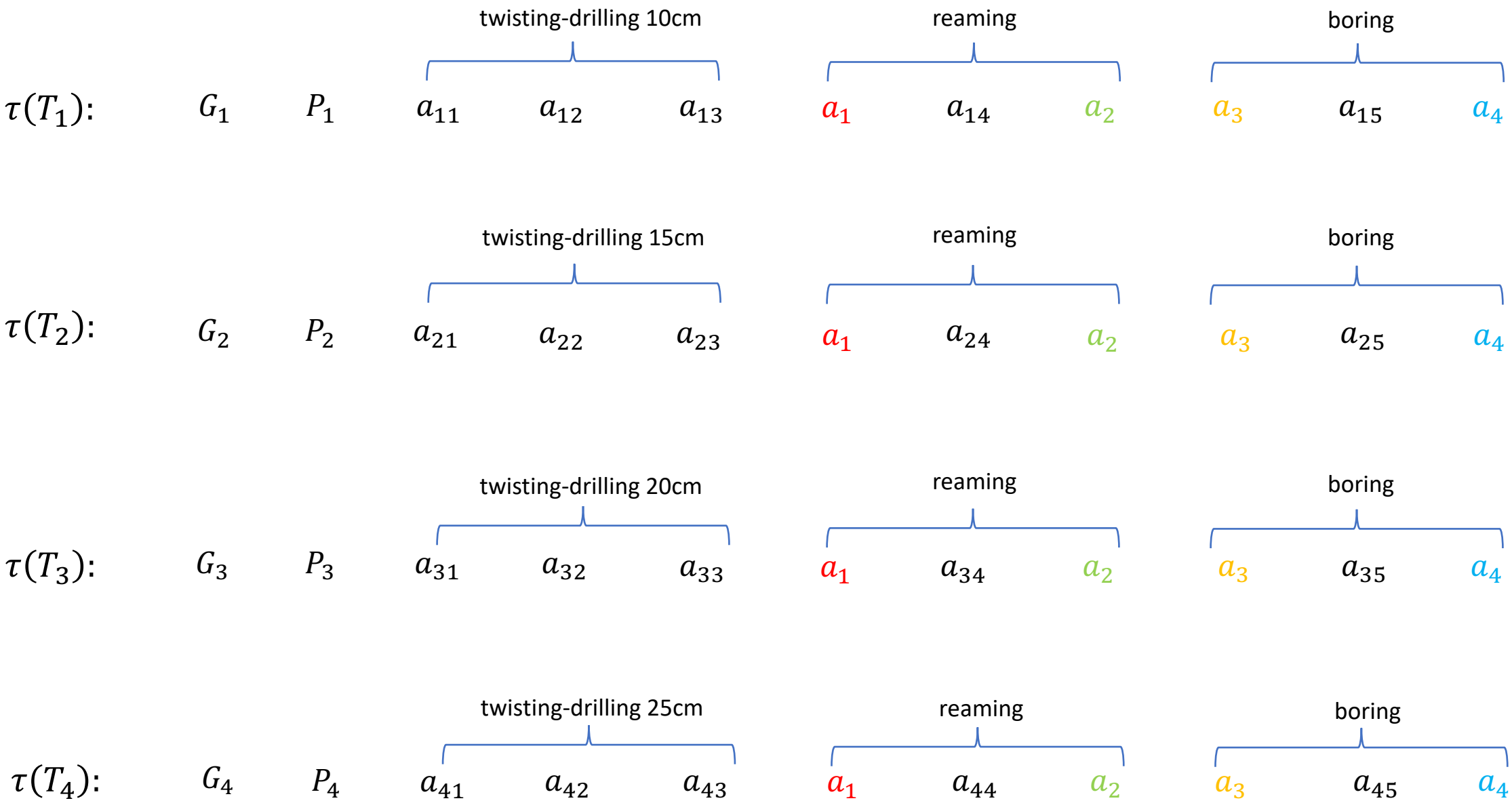
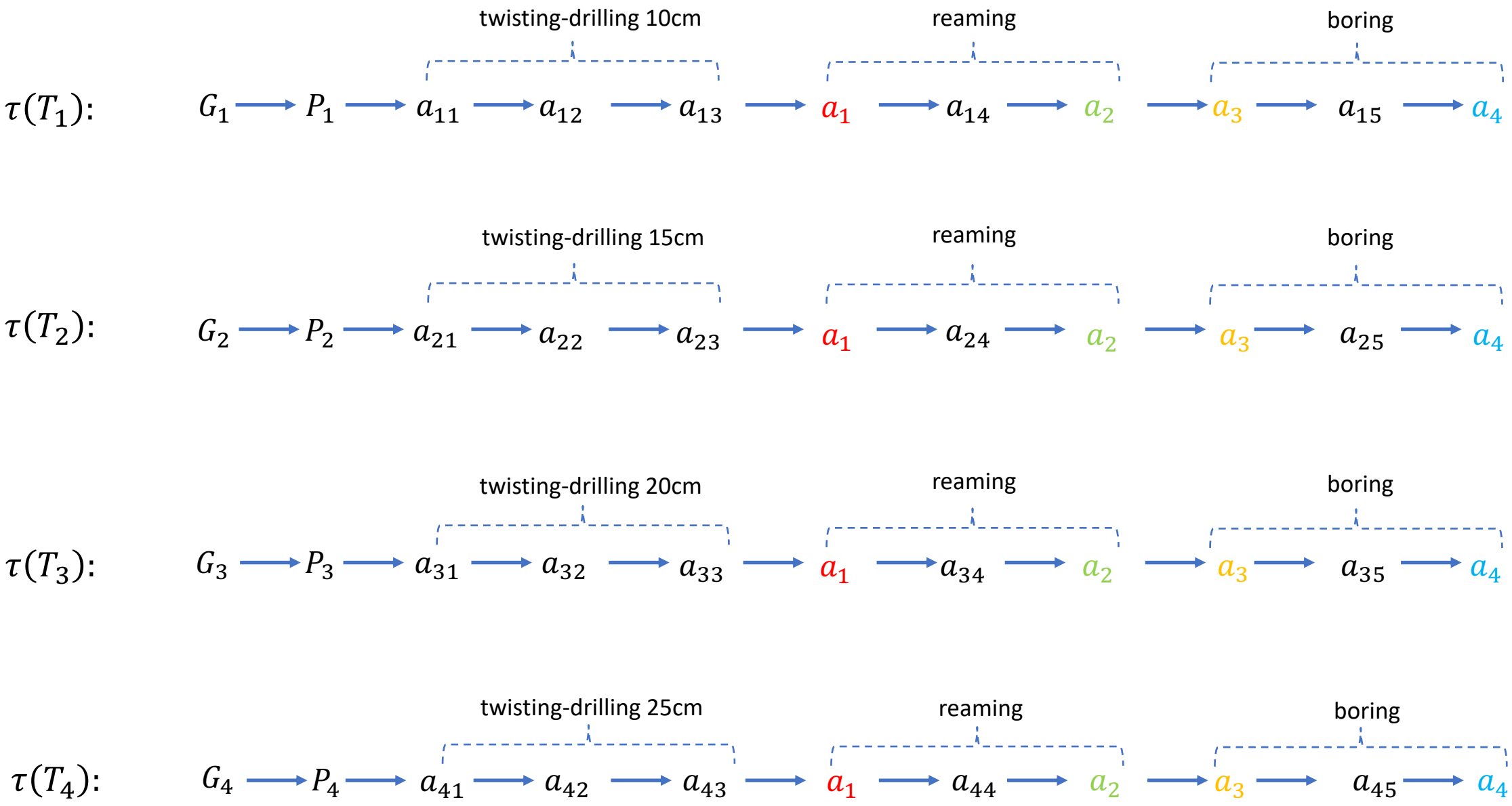
		Operation 1	Operation 2	Operation 3
block 1		twisting-drilling 10cm	reaming	boring
block 2		twisting-drilling 15cm	reaming	boring
block 3		twisting-drilling 20cm	reaming	boring
block 4		twisting-drilling 25cm	reaming	boring


twisting-drilling 10cm
reaming
boring
$\tau(T_1)$: G_1 P_1 a_{11} a_{12} a_{13} a_1 a_{14} a_2 a_3 a_{15} a_4
twisting-drilling 15cm
reaming
boring
$\tau(T_2)$: G_2 P_2 a_{21} a_{22} a_{23} a_1 a_{24} a_2 a_3 a_{25} a_4
twisting-drilling 20cm
reaming
boring
$\tau(T_3)$: G_3 P_3 a_{31} a_{32} a_{33} a_1 a_{34} a_2 a_3 a_{35} a_4
twisting-drilling 25cm
reaming
boring
$\tau(T_4)$: G_4 P_4 a_{41} a_{42} a_{43} a_1 a_{44} a_2 a_3 a_{45} a_4


τ(T1):
G1 P1 a11 a12 a13 a1 a14 a2 a3 a15 a4
twisting-drilling 10cm
reaming
boring
τ(T2):
G2 P2 a21 a22 a23 a1 a24 a2 a3 a25 a4
twisting-drilling 15cm
reaming
boring
τ(T3):
G3 P3 a31 a32 a33 a1 a34 a2 a3 a35 a4
twisting-drilling 20cm
reaming
boring
τ(T4):
G4 P4 a41 a42 a43 a1 a44 a2 a3 a45 a4
twisting-drilling 25cm
reaming
boring

Overlap Progression Links:

a_1

$(\{a_{13}, a_{23}\} \rightarrow \{a_1 - P_1, a_1 - P_2\})$

$(\{a_{13}, a_{33}\} \rightarrow \{a_1 - P_1, a_1 - P_3\})$

$(\{a_{13}, a_{43}\} \rightarrow \{a_1 - P_1, a_1 - P_4\})$

$(\{a_{23}, a_{33}\} \rightarrow \{a_1 - P_2, a_1 - P_3\})$

$(\{a_{23}, a_{43}\} \rightarrow \{a_1 - P_2, a_1 - P_4\})$

$(\{a_{33}, a_{43}\} \rightarrow \{a_1 - P_3, a_1 - P_4\})$

$\boldsymbol{C_4^2}$

$(\{a_{13}, a_{23}, a_{33}\} \rightarrow \{a_1 - P_1, a_1 - P_2, a_1 - P_3\})$

$(\{a_{13}, a_{23}, a_{43}\} \rightarrow \{a_1 - P_1, a_1 - P_2, a_1 - P_4\})$

$(\{a_{13}, a_{33}, a_{43}\} \rightarrow \{a_1 - P_1, a_1 - P_3, a_1 - P_4\})$

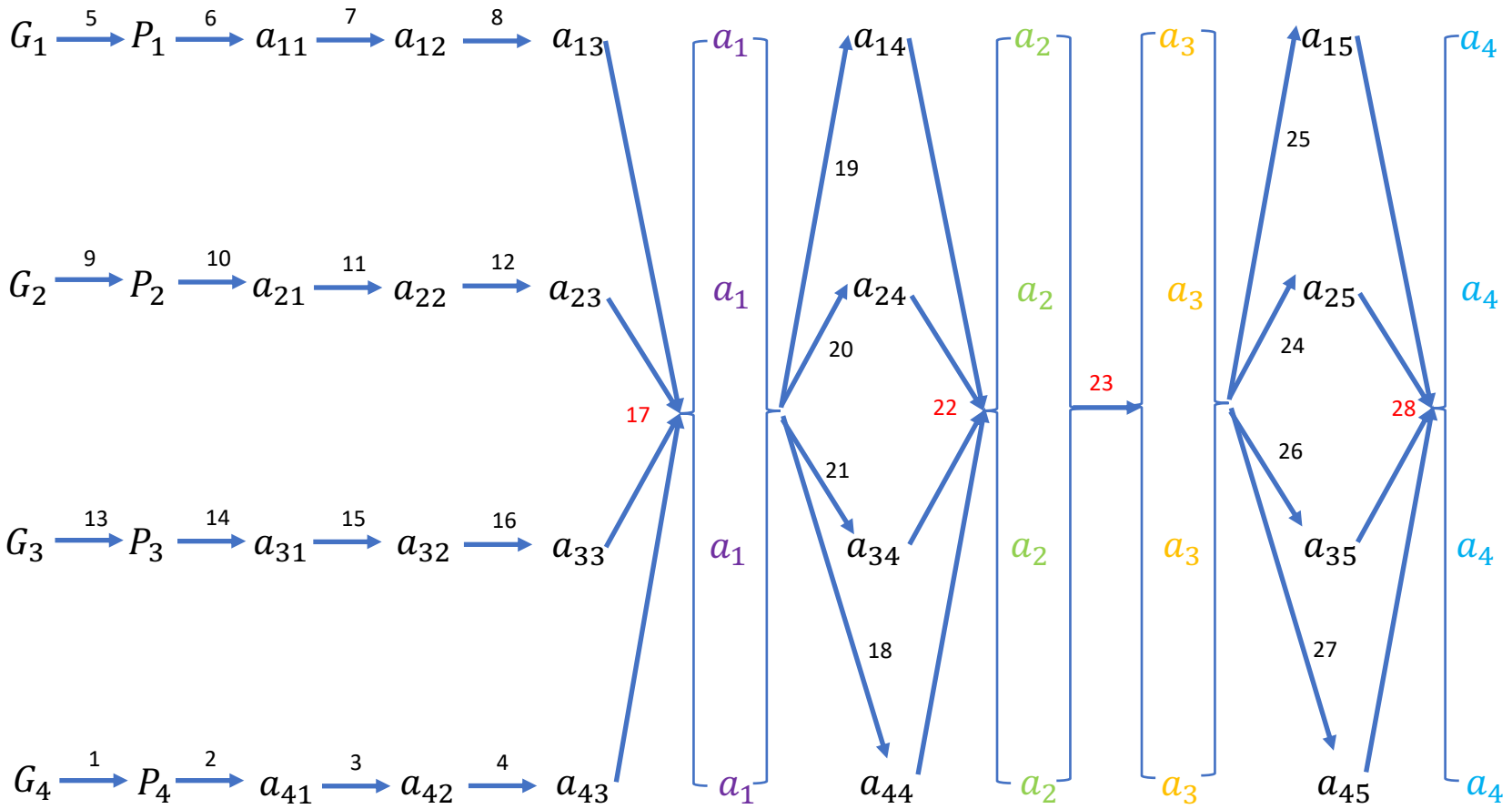
$(\{a_{23}, a_{33}, a_{43}\} \rightarrow \{a_1 - P_2, a_1 - P_3, a_1 - P_4\})$

$\boldsymbol{C_4^3}$

$(\{a_{13}, a_{23}, a_{33}, a_{43}\} \rightarrow \{a_1 - P_1, a_1 - P_2, a_1 - P_3, a_1 - P_4\})$

$\boldsymbol{C_4^4}$

Result from Fast-forward planner

```
Step 1: g4_p4  (100)
Step 2: p4_a41  (100)
Step 3: a41_a42  (100)
Step 4: a42_a43  (100)
Step 5: g1_p1  (100)
Step 6: p1_a11  (100)
Step 7: a11_a12  (100)
Step 8: a12_a13  (100)
Step 9: g2_p2  (100)
Step 10: p2_a21  (100)
Step 11: a21_a22  (100)
Step 12: a22_a23  (100)
Step 13: g3_p3  (100)
Step 14: p3_a31  (100)
Step 15: a31_a32  (100)
Step 16: a32_a33  (100)
Step 17: a13_a1-1234  (97)
Step 18: a1-p4_a44  (100)
Step 19: a1-p1_a14  (100)
Step 20: a1-p2_a24  (100)
Step 21: a1-p3_a34  (100)
Step 22: a14_a2-1234  (97)
Step 23: a2_a3-1234  (97)
Step 24: a3-p2_a25  (100)
Step 25: a3-p1_a15  (100)
Step 26: a3-p3_a35  (100)
Step 27: a3-p4_a45  (100)
Step 28: a15_a4-1234  (97)
```

Overlap Progression links