

$A_{15.2} \pmod{3}$

	φ_1	φ_3	φ_7	φ_5	φ_{11}	φ_9	φ_{13}	φ_{25}	φ_{15}	φ_{28}	φ_{21}	φ_{31}	φ_{17}	φ_{36}
15^1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 14^1$	1	1	.	.	.	.	.	.	.	.	.	.	.	.
$2^1 13^1$	.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^2 12^1$	.	1	.	1	.	.	.	.	.	.	.	.	.	.
$3^1 11^1$	.	1	.	.	1	.	.	.	.	.	.	.	.	.
$1^1 2^1 12^1$	1	1	.	1	1	1	.	.	.	.	.	.	.	.
$1^3 12^1$	.	.	.	1	.	1	.	.	.	.	.	.	.	.
$4^1 11^1$	.	1	.	.	1	.	1	.	.	.	.	.	.	.
$1^1 3^1 11^1$	.	.	.	.	.	.	.	1	.	.	.	.	.	.
$2^2 11^1$	1	2	.	.	1	1	1	.	1	.	.	.	.	.
$1^2 2^1 11^1$	.	.	.	.	.	.	.	.	.	1	.	.	.	.
$1^4 11^1$	.	.	.	.	.	1	.	.	1	.	.	.	.	.
$5^1 10^1$	.	.	1	.	.	.	.	.	.	.	1	.	.	.
$1^1 4^1 10^1$	1	1	.	1	1	1	1	.	.	.	.	1	.	.
$2^1 3^1 10^1$	1	2	.	2	1	1	1	.	1	.	.	1	1	.
$1^2 3^1 10^1$	.	.	.	.	.	.	.	.	.	1	.	.	.	1
$1^1 2^2 10^1$	.	.	2	.	.	.	.	.	.	.	1	.	.	.
$1^3 2^1 10^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^5 10^1$	.	.	.	.	.	.	.	.	1	.	.	.	1	.
$6^1 9^1$	1	1	.	.	.	.	1	.	.	.	.	.	.	.
$1^1 5^1 9^1$	2	1	.	1	.	.	1	.	.	.	.	1	.	.
$2^1 4^1 9^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 4^1 9^1$	2	.	.	1	.	1	.	.	.	.	.	1	.	.
$3^2 9^1$	1	.	.	2	.	1	.	.	.	.	.	1	1	.
$1^1 2^1 3^1 9^1$	4	2	.	2	1	2	1	.	1	.	.	1	1	.
$1^3 3^1 9^1$	2	.	.	.	.	1	.	.	1	.	.	.	.	.
$2^3 9^1$	2	2	.	.	1	.	1	.	1	.	.	.	.	.
$1^2 2^2 9^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^4 2^1 9^1$	.	.	.	.	.	.	.	.	1	.	.	.	1	.
$1^6 9^1$	.	.	.	.	.	.	.	.	.	.	.	.	1	.
$7^1 8^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 6^1 8^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$2^1 5^1 8^1$	2	1	.	1	.	.	1	.	.	.	.	1	1	.
$1^2 5^1 8^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	1
$3^1 4^1 8^1$	1	1	.	1	.	1	1	.	1	.	.	1	1	.
$1^1 2^1 4^1 8^1$	4	2	.	1	1	1	2	.	1	.	.	1	1	.
$1^3 4^1 8^1$	2	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 3^2 8^1$	.	.	.	.	.	.	.	.	.	1	.	.	.	1
$2^2 3^1 8^1$	.	.	.	.	.	.	.	1	.	.	.	.	.	.
$1^2 2^1 3^1 8^1$	4	2	.	.	1	1	1	.	1	.	.	.	.	.

	φ_{33}	φ_{19}	φ_{29}	φ_{47}	φ_{41}	φ_{23}	φ_{37}	φ_{52}	φ_2	φ_{39}	φ_{45}	φ_{54}	φ_{24}	φ_{49}
15^1
$1^1 14^1$
$2^1 13^1$
$1^2 13^1$
$3^1 12^1$
$1^1 2^1 12^1$
$1^3 12^1$
$4^1 11^1$
$1^1 3^1 11^1$
$2^2 11^1$
$1^2 2^1 11^1$
$1^4 11^1$
$5^1 10^1$
$1^1 4^1 10^1$
$2^1 3^1 10^1$
$1^2 3^1 10^1$
$1^1 2^2 10^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^1 10^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^5 10^1$
$6^1 9^1$.	1	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 5^1 9^1$.	1	1	.	.	.	.	.	.	.	.	.	.	.
$2^1 4^1 9^1$.	.	.	1	.	.	.	.	.	.	.	.	.	.
$1^2 4^1 9^1$.	.	1	.	1	.	.	.	.	.	.	.	.	.
$3^2 9^1$.	.	1	.	.	1	.	.	.	.	.	.	.	.
$1^1 2^1 3^1 9^1$.	1	1	.	1	1	1	.	.	.	.	.	.	.
$1^3 3^1 9^1$	1	.	1	.	.	.	.	.	.	.
$2^3 9^1$.	1	.	.	.	.	1	.	.	.	.	.	.	.
$1^2 2^2 9^1$	1	.	.	.	.	.	.
$1^4 2^1 9^1$	1	1	.	.	.	.	.	.	.
$1^6 9^1$	1	.	.	.	.	.	.	.	.
$7^1 8^1$.	1	.	.	.	.	.	.	1	.	.	.	.	.
$1^1 6^1 8^1$	1	.	.	.	.
$2^1 5^1 8^1$.	1	1	.	.	.	.	.	1	.	1	.	.	.
$1^2 5^1 8^1$	1	.	.
$3^1 4^1 8^1$.	.	1	.	.	1	.	.	.	.	1	.	1	.
$1^1 2^1 4^1 8^1$.	1	2	.	1	1	1	.	1	.	1	.	1	1
$1^3 4^1 8^1$.	.	1	.	1	.	1	.	.	.	.	.	.	1
$1^1 3^2 8^1$	1	.	.
$2^2 3^1 8^1$	1	.	.	.	.
$1^2 2^1 3^1 8^1$.	1	1	.	1	1	2	.	1	.	.	.	1	1

	φ_{44}	φ_{63}	φ_{55}	φ_4	φ_6	φ_8	φ_{61}	φ_{65}	φ_{18}	φ_{43}	φ_{59}	φ_{68}	φ_{58}	φ_{57}
$1^4 3^1 8^1$.	1	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 2^3 8^1$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^2 8^1$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^5 2^1 8^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^7 8^1$
$1^1 7^2$.	.	.	1	.	.	.	.	.	.	.	.	.	.
$2^1 6^1 7^1$.	.	.	1	1	.	.	.	.	.	.	.	.	.
$1^2 6^1 7^1$	1	.	.	.	.	.	.	.	.
$3^1 5^1 7^1$	1	.	.	.	.	.	.	.
$1^1 2^1 5^1 7^1$	1	1	.	.	.	.	.	.
$1^3 5^1 7^1$	1	.	.	.	.	.	.
$4^2 7^1$	1	.	.	.	1	.	.	.	.	.
$1^1 3^1 4^1 7^1$	1	1	.	1	.	.	.	.
$2^2 4^1 7^1$.	.	.	1	1	.	.	.	1	.	1	.	.	.
$1^2 2^1 4^1 7^1$	1	.	.
$1^4 4^1 7^1$	1	.	.	.
$2^1 3^2 7^1$	1	.	.	.	.	1	.	.	.	.	.	.	1	.
$1^2 3^2 7^1$	1	.	1	.	.	.	1
$1^1 2^2 3^1 7^1$.	.	1	1	.	.	.	.	.	.	1	.	.	.
$1^3 2^1 3^1 7^1$.	.	1	.	.	.	.	.	1	.	1	.	.	.
$1^5 3^1 7^1$	1	.	.	.	.	.	.	.	.	.	.	.	1	.
$2^4 7^1$	1
$1^2 2^3 7^1$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^4 2^2 7^1$	1	.	.	.	1
$1^6 2^1 7^1$	1	.	.	.	.
$1^8 7^1$	1	.	.	.	.	.
$3^1 6^2$	1	.	.	.	.	.	.	.	.	.
$1^1 2^1 6^2$.	.	.	1	1	.	.	.	.	.	.	.	.	.
$1^3 6^2$.	.	.	1	.	.	.	.	.	.	.	.	.	.
$4^1 5^1 6^1$.	.	.	1	1	.	.	.	1	.	.	.	.	.
$1^1 3^1 5^1 6^1$	1	1	.	1	.	.	.	.
$2^2 5^1 6^1$.	.	.	2	1	.	.	.	1	.	1	.	.	.
$1^2 2^1 5^1 6^1$	1	.	.
$1^4 5^1 6^1$.	.	.	2	.	.	.	.	.	.	1	.	.	.
$1^1 4^2 6^1$.	.	.	1	1	.	.	.	1	.	.	.	.	.
$2^1 3^1 4^1 6^1$.	.	.	3	1	.	.	.	1	.	1	.	.	.
$1^2 3^1 4^1 6^1$	1	.	.
$1^1 2^2 4^1 6^1$
$1^3 2^1 4^1 6^1$
$1^5 4^1 6^1$.	.	.	2	.	.	.	.	.	.	1	.	.	.

	φ_{60}	φ_{10}	φ_{12}	φ_{16}	φ_{27}	φ_{14}	φ_{26}	φ_{38}	φ_{56}	φ_{64}	φ_{69}	φ_{50}	φ_{70}	φ_{34}
$1^4 3^1 8^1$
$1^1 2^3 8^1$
$1^3 2^2 8^1$
$1^5 2^1 8^1$
$1^7 8^1$
$1^1 7^2$
$2^1 6^1 7^1$
$1^2 6^1 7^1$
$3^1 5^1 7^1$
$1^1 2^1 5^1 7^1$
$1^3 5^1 7^1$
$4^2 7^1$
$1^1 3^1 4^1 7^1$
$2^2 4^1 7^1$
$1^2 2^1 4^1 7^1$
$1^4 4^1 7^1$
$2^1 3^2 7^1$
$1^2 3^2 7^1$
$1^1 2^2 3^1 7^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^1 3^1 7^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^5 3^1 7^1$
$2^4 7^1$
$1^2 2^3 7^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^4 2^2 7^1$
$1^6 2^1 7^1$
$1^8 7^1$
$3^1 6^2$.	1	.	.	.	.	.	.	.	.	.	.	.	.
$1^1 2^1 6^2$.	1	1	.	.	.	.	.	.	.	.	.	.	.
$1^3 6^2$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$4^1 5^1 6^1$.	1	.	1	.	.	.	.	.	.	.	.	.	.
$1^1 3^1 5^1 6^1$	1	.	.	.	.	.	.	.	.	.
$2^2 5^1 6^1$.	1	1	1	.	1	.	.	.	.	.	.	.	.
$1^2 2^1 5^1 6^1$	1	.	.	.	.	.	.	.
$1^4 5^1 6^1$.	.	1	.	.	1	.	.	.	.	.	.	.	.
$1^1 4^2 6^1$.	1	1	1	.	.	.	1	.	.	.	.	.	.
$2^1 3^1 4^1 6^1$.	1	1	1	.	1	.	1	1	.	.	.	.	.
$1^2 3^1 4^1 6^1$	1	.	.	1	.	.	.	.
$1^1 2^2 4^1 6^1$	1	.	.	.
$1^3 2^1 4^1 6^1$	1	.	.	.
$1^5 4^1 6^1$	1	.	.	1	.	.	.	.	.

	φ_{33}	φ_{19}	φ_{29}	φ_{47}	φ_{41}	φ_{23}	φ_{37}	φ_{52}	φ_2	φ_{39}	φ_{45}	φ_{54}	φ_{24}	φ_{49}
$3^3 6^1$.	.	1	.	1	1	.	.	.	.	.	.	.	.
$1^1 2^1 3^2 6^1$.	.	1	.	1	2	1	.	2	.	.	.	1	1
$1^3 3^2 6^1$	1	1	.	2	.	.	.	1	1
$2^3 3^1 6^1$	1	.	.	1	.	.	.	.	.
$1^2 2^2 3^1 6^1$
$1^4 2^1 3^1 6^1$	2	.	.	2	.	.	.	1	.
$1^6 3^1 6^1$	1	.	.	.	.	.	.	1	.
$1^1 2^4 6^1$	1	.	.	.	.	.
$1^3 2^3 6^1$	2	.	.	.	1	.
$1^5 2^2 6^1$
$1^7 2^1 6^1$	1	.
$1^9 6^1$
5^3	.	.	1	.	.	1	.	.	.	.	.	.	.	.
$1^1 4^1 5^2$	1	.	.
$2^1 3^1 5^2$	1	.	.
$1^2 3^1 5^2$
$1^1 2^2 5^2$.	.	1	.	.	1	.	.	2	.	.	.	1	1
$1^3 2^1 5^2$	2	.	.	.	1	1
$1^5 5^2$
$2^1 4^2 5^1$	1	.	.	.	.
$1^2 4^2 5^1$.	1	1	.	.	1	1	.	3	.	.	.	1	1
$3^2 4^1 5^1$.	1	1	.	1	1	1	.	2	.	.	.	.	.
$1^1 2^1 3^1 4^1 5^1$.	1	1	.	1	2	2	.	6	.	.	.	2	1
$1^3 3^1 4^1 5^1$	1	1	.	5	.	.	.	2	1
$2^3 4^1 5^1$	1	.	.	2	.	.	.	1	.
$1^2 2^2 4^1 5^1$
$1^4 2^1 4^1 5^1$	1	.	.	4	.	.	.	1	.
$1^6 4^1 5^1$	2	.	.	.	.	.
$1^1 3^3 5^1$	1	1	1	.	2	.	.	.	1	.
$2^2 3^2 5^1$
$1^2 2^1 3^2 5^1$
$1^4 3^2 5^1$
$1^1 2^3 3^1 5^1$
$1^3 2^2 3^1 5^1$
$1^5 2^1 3^1 5^1$	1	.	.	4	.	.	.	1	.
$1^7 3^1 5^1$
$2^5 5^1$	1	.	.	.	.	.
$1^2 2^4 5^1$
$1^4 2^3 5^1$	2	.	.	.	.	.
$1^6 2^2 5^1$	2	.	.	.	.	.

	φ_{60}	φ_{10}	φ_{12}	φ_{16}	φ_{27}	φ_{14}	φ_{26}	φ_{38}	φ_{56}	φ_{64}	φ_{69}	φ_{50}	φ_{70}	φ_{34}
$3^3 6^1$	.	.	.	.	.	.	.	.	1	.	.	.	.	.
$1^1 2^1 3^2 6^1$	1	.	1	.	.	1	.	1	1	.	.	1	.	.
$1^3 3^2 6^1$	1	.	1	1	.	1	.	1	.	.	.	1	.	.
$2^3 3^1 6^1$	1	.	.	.	.	1	.	.	.	.	.	1	.	.
$1^2 2^2 3^1 6^1$	.	.	.	.	.	.	.	.	.	.	.	.	1	.
$1^4 2^1 3^1 6^1$	1	.	.	1	.	1	.	1	1	.	.	1	.	.
$1^6 3^1 6^1$	.	.	.	.	.	.	.	1	1	.	.	.	.	.
$1^1 2^4 6^1$	1	.	.	.	.	.	.	.	.	.	.	1	.	.
$1^3 2^3 6^1$	1	.	.	.	.	.	.	1	.	.	.	1	.	.
$1^5 2^2 6^1$	.	.	.	.	.	.	.	.	.	1	.	.	.	.
$1^7 2^1 6^1$	.	.	.	1	.	.	.	1	.	.	.	.	.	.
$1^9 6^1$	.	.	.	1	.	.	.	.	.	.	.	.	.	.
5^3	.	.	.	1	.	.	.	.	.	.	.	.	.	.
$1^1 4^1 5^2$	.	.	.	.	.	.	.	.	.	.	.	.	.	1
$2^1 3^1 5^2$	.	.	.	.	.	.	.	.	.	.	.	.	.	1
$1^2 3^1 5^2$	.	.	.	.	1	.	.	.	.	.	.	.	.	.
$1^1 2^2 5^2$	1	1	1	1	.	1	.	.	.	.	.	.	.	.
$1^3 2^1 5^2$	1	1	1	.	.	1	.	.	.	.	.	.	.	.
$1^5 5^2$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$2^1 4^2 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 4^2 5^1$	.	1	1	1	.	.	.	1	.	.	.	.	.	.
$3^2 4^1 5^1$	.	.	.	1	.	1	.	1	1	.	.	.	.	.
$1^1 2^1 3^1 4^1 5^1$	1	1	1	1	.	2	.	2	1	.	.	1	.	.
$1^3 3^1 4^1 5^1$	1	2	1	1	.	1	.	1	.	.	.	1	.	.
$2^3 4^1 5^1$	1	.	.	.	.	1	.	.	.	.	.	1	.	.
$1^2 2^2 4^1 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	1	.
$1^4 2^1 4^1 5^1$	1	1	1	1	.	2	.	1	1	.	.	1	.	.
$1^6 4^1 5^1$	.	.	1	.	.	1	.	1	1	.	.	.	.	.
$1^1 3^3 5^1$	.	.	.	.	.	1	.	1	1	.	.	1	.	.
$2^2 3^2 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 2^1 3^2 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^4 3^2 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	1
$1^1 2^3 3^1 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^2 3^1 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^5 2^1 3^1 5^1$	.	1	1	1	.	1	.	2	1	.	.	1	.	.
$1^7 3^1 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$2^5 5^1$	.	.	.	.	.	.	.	.	.	.	.	1	.	.
$1^2 2^4 5^1$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^4 2^3 5^1$	.	.	.	.	.	.	.	1	.	.	.	1	.	.
$1^6 2^2 5^1$	.	1	.	1	.	.	.	1	.	.	.	.	.	.

	φ_{33}	φ_{19}	φ_{29}	φ_{47}	φ_{41}	φ_{23}	φ_{37}	φ_{52}	φ_2	φ_{39}	φ_{45}	φ_{54}	φ_{24}	φ_{49}
$1^8 2^1 5^1$
$1^{10} 5^1$
$3^1 4^3$.	1	.	.	.	.	1	.	2	.	.	.	.	.
$1^1 2^1 4^3$.	1	.	.	.	.	1	.	3	.	.	.	1	.
$1^3 4^3$	2	.	.	.	1	.
$1^1 3^2 4^2$	1	.	.	.	.	.	.
$2^2 3^1 4^2$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 2^1 3^1 4^2$	2	1	.	5	.	.	.	2	.
$1^4 3^1 4^2$
$1^1 2^3 4^2$	1	.	.	2	.	.	.	1	.
$1^3 2^2 4^2$	1	.	.	4	.	.	.	1	.
$1^5 2^1 4^2$
$1^7 4^2$	2	.	.	.	.	.
$2^1 3^3 4^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 3^3 4^1$	2	1	.	2	.	.	.	1	.
$1^1 2^2 3^2 4^1$
$1^3 2^1 3^2 4^1$
$1^5 3^2 4^1$
$2^4 3^1 4^1$	1	.	.	1	.	.	.	.	.
$1^2 2^3 3^1 4^1$
$1^4 2^2 3^1 4^1$	1	.	.	4	.	.	.	1	.
$1^6 2^1 3^1 4^1$	4	.	.	.	1	.
$1^8 3^1 4^1$
$1^1 2^5 4^1$
$1^3 2^4 4^1$
$1^5 2^3 4^1$	2	.	.	.	.	.
$1^7 2^2 4^1$
$1^9 2^1 4^1$
$1^{11} 4^1$
3^5	1	.
$1^1 2^1 3^4$	1	.	.	.	.	.	.	1	.
$1^3 3^4$	1	.	.	.	.	.	.	.	.
$2^3 3^3$	1	.	.	.	.	.	.	.	.
$1^2 2^2 3^3$
$1^4 2^1 3^3$	1	.	.	1	.	.	.	1	.
$1^6 3^3$	1	.	.	.	1	.
$1^1 2^4 3^2$	1	.	.	.	.	.
$1^3 2^3 3^2$	2	.	.	.	.	.
$1^5 2^2 3^2$
$1^7 2^1 3^2$	1	.	.	.	.	.

	φ_{44}	φ_{63}	φ_{55}	φ_4	φ_6	φ_8	φ_{61}	φ_{65}	φ_{18}	φ_{43}	φ_{59}	φ_{68}	φ_{58}	φ_{57}
$1^8 2^1 5^1$
$1^{10} 5^1$
$3^1 4^3$
$1^1 2^1 4^3$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^3 4^3$.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1^1 3^2 4^2$
$2^2 3^1 4^2$	1	.	.	.	1
$1^2 2^1 3^1 4^2$.	.	1	1	1	.	.	.	1	.	.	.	.	.
$1^4 3^1 4^2$	1	.	.	.	1
$1^1 2^3 4^2$.	.	.	1	1	.	.	.	1	.	.	.	.	.
$1^3 2^2 4^2$.	.	.	2	1	.	.	.	1	.	.	.	.	.
$1^5 2^1 4^2$
$1^7 4^2$.	.	.	2	.	.	.	.	.	.	.	.	.	.
$2^1 3^3 4^1$	1	.	.	.	.
$1^2 3^3 4^1$.	.	.	1	.	.	.	.	1	.	.	.	.	.
$1^1 2^2 3^2 4^1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^1 3^2 4^1$	1	.	.	.	.	1	.	.	.	.	.	.	.	.
$1^5 3^2 4^1$	1	.	.	.	.
$2^4 3^1 4^1$.	.	.	1	.	.	.	.	.	.	.	.	.	.
$1^2 2^3 3^1 4^1$	1	.	.	.	.	.	.	.	.
$1^4 2^2 3^1 4^1$.	.	.	2	1	.	.	.	1	.	.	.	.	.
$1^6 2^1 3^1 4^1$.	.	.	2	2	.	.	.	1	.	.	.	.	.
$1^8 3^1 4^1$	2	.	.	.	.	.	.	.	.
$1^1 2^5 4^1$
$1^3 2^4 4^1$
$1^5 2^3 4^1$	1	.	.	.	.	.	.	.	.	.
$1^7 2^2 4^1$
$1^9 2^1 4^1$
$1^{11} 4^1$	1	.	.	.	.	.	.	.	.	.
3^5
$1^1 2^1 3^4$	1	.	.	.	.	.
$1^3 3^4$.	.	.	1	.	.	.	.	1	.	.	.	.	.
$2^3 3^3$
$1^2 2^2 3^3$
$1^4 2^1 3^3$.	.	.	1	1	.	.	.	1	.	.	.	.	.
$1^6 3^3$	2	.	.	.	1	.	.	.	.	.
$1^1 2^4 3^2$.	.	.	1	.	.	.	.	.	.	.	.	.	.
$1^3 2^3 3^2$.	.	.	1	1	.	.	.	1	.	.	.	.	.
$1^5 2^2 3^2$
$1^7 2^1 3^2$.	.	.	2	2	.	.	.	1	.	.	.	.	.

	φ_1	φ_3	φ_7	φ_5	φ_{11}	φ_9	φ_{13}	φ_{25}	φ_{15}	φ_{28}	φ_{21}	φ_{31}	φ_{17}	φ_{36}
$1^9 3^2$
$2^6 3^1$	1	1	.	.	.	.	.	.	.	.	.	.	.	.
$1^2 2^5 3^1$
$1^4 2^4 3^1$
$1^6 2^3 3^1$
$1^8 2^2 3^1$
$1^{10} 2^1 3^1$
$1^{12} 3^1$
$1^{12} 7$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$1^3 2^6$
$1^5 2^5$
$1^7 2^4$
$1^9 2^3$
$1^{11} 2^2$
$1^{13} 2^1$
1^{15}

	φ_{33}	φ_{19}	φ_{29}	φ_{47}	φ_{41}	φ_{23}	φ_{37}	φ_{52}	φ_2	φ_{39}	φ_{45}	φ_{54}	φ_{24}	φ_{49}
$1^9 3^2$	1	.	.	.	.	.
$2^6 3^1$	1	.	.	.	.	.
$1^2 2^5 3^1$
$1^4 2^4 3^1$	2	.	.	.	.	.
$1^6 2^3 3^1$	1	.	.	.	.	.
$1^8 2^2 3^1$
$1^{10} 2^1 3^1$	1	.	.	.	.	.
$1^{12} 3^1$
$1^{12} 7$	1	.	.	.	.	.
$1^3 2^6$	1	.	.	.	.	.
$1^5 2^5$
$1^7 2^4$
$1^9 2^3$
$1^{11} 2^2$
$1^{13} 2^1$	1	.	.	.	.	.
1^{15}	1	.	.	.	.	.

