

List of isotropic sequences for the $(\tau, \bar{\tau})$ -generic Enriques surfaces

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This is an ancillary document to the paper “The non-degeneracy invariant of Brandhorst and Shimada’s families of Enriques surfaces” where we provide explicit non-degenerate isotropic sequences for the $(\tau, \bar{\tau})$ -generic Enriques surfaces.

(1) $\text{cnd}(Y_1) \geq 7$. Sequence: $\frac{1}{2}(R_0 + R_1)$, $\frac{1}{2}(R_0 + R_2)$, $\frac{1}{2}(R_0 + R_3)$, $\frac{1}{2}(R_0 + R_{10})$, $\frac{1}{2}(R_0 + R_{11})$, $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_0 + R_{13})$.

(2) $\text{nd}(Y_2) = 10$. Sequence: $\frac{1}{2}(R_0 + R_4)$, $\frac{1}{2}(R_0 + R_6)$, $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_0 + R_{29})$, $\frac{1}{2}(R_0 + R_{31})$, $\frac{1}{2}(R_1 + R_2)$, $\frac{1}{2}(R_1 + R_3)$, $\frac{1}{2}(R_1 + R_{22})$, $(R_0 + R_1)$.

(3) $\text{nd}(Y_3) = 10$. Sequence: $\frac{1}{2}(R_0 + R_4)$, $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{10})$, $\frac{1}{2}(R_1 + R_3)$, $\frac{1}{2}(R_1 + R_6)$, $\frac{1}{2}(R_1 + R_{11})$, $\frac{1}{2}(R_2 + R_5)$, $\frac{1}{2}(R_2 + R_7)$, $\frac{1}{2}(R_2 + R_8)$, $\frac{1}{2}(R_0 + R_1 + R_2)$.

(4) $\text{nd}(Y_4) = 10$. Sequence: $\frac{1}{2}(R_0 + R_6)$, $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_0 + R_8)$, $\frac{1}{2}(R_0 + R_{46})$, $\frac{1}{2}(R_0 + R_{41})$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_1 + R_{55})$, $\frac{1}{2}(R_2 + R_{11})$, $\frac{1}{2}(R_2 + R_{37})$.

(5) $\text{nd}(Y_5) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{10})$, $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_1 + R_{13})$, $\frac{1}{2}(R_2 + R_{16})$, $\frac{1}{2}(R_4 + R_5)$, $\frac{1}{2}(R_4 + R_6)$, $\frac{1}{2}(R_8 + R_{16})$, $\frac{1}{2}(R_{15} + R_{16})$, $\frac{1}{2}(R_3 + R_{16})$.

(6) $\text{nd}(Y_6) = 10$. Sequence: $\frac{1}{2}(R_{79} + R_{124})$, $\frac{1}{2}(R_{79} + R_{19})$, $\frac{1}{2}(R_{120} + R_8)$, $\frac{1}{2}(R_9 + R_{11})$, $\frac{1}{2}(R_{74} + R_6)$, $\frac{1}{2}(R_{79} + R_0 + R_{18})$, $\frac{1}{2}(R_{120} + R_6 + R_{18})$, $\frac{1}{2}(R_8 + R_6 + R_{18})$, $\frac{1}{2}(R_9 + R_6 + R_0)$, $\frac{1}{2}(R_{11} + R_6 + R_0)$.

(7) $\text{nd}(Y_7) = 10$. Sequence: $\frac{1}{2}(R_0 + R_7)$, $\frac{1}{2}(R_1 + R_{24})$, $\frac{1}{2}(R_2 + R_8)$, $\frac{1}{2}(R_2 + R_{13})$, $\frac{1}{2}(R_3 + R_4)$, $\frac{1}{2}(R_3 + R_{15})$, $\frac{1}{2}(R_7 + R_{12})$, $\frac{1}{2}(R_9 + R_{24})$, $\frac{1}{2}(R_{10} + R_{24})$, $\frac{1}{2}(R_{11} + R_{24})$.

(8) $\text{nd}(Y_8) = 10$. Sequence: $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{51})$, $\frac{1}{2}(R_0 + R_{11})$, $\frac{1}{2}(R_0 + R_{24})$, $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_2 + R_{72})$, $\frac{1}{2}(R_2 + R_{40})$, $\frac{1}{2}(R_2 + R_{56})$, $\frac{1}{2}(R_3 + R_{64})$, $\frac{1}{2}(R_3 + R_{92})$.

(9) $\text{nd}(Y_9) = 10$. Sequence: $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_1 + R_{12})$, $\frac{1}{2}(R_2 + R_{13})$, $\frac{1}{2}(R_2 + R_{14})$, $\frac{1}{2}(R_3 + R_{20})$, $\frac{1}{2}(R_8 + R_{20})$, $\frac{1}{2}(R_{10} + R_{20})$, $\frac{1}{2}(R_{16} + R_{20})$.

(10) $\text{nd}(Y_{10}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_5 + R_{98})$, $\frac{1}{2}(R_9 + R_{101})$, $\frac{1}{2}(R_{10} + R_{101})$, $\frac{1}{2}(R_{91} + R_{98})$, $\frac{1}{2}(R_1 + R_{21})$, $\frac{1}{2}(R_1 + R_{95})$, $\frac{1}{2}(R_1 + R_{96})$, $\frac{1}{2}(R_5 + R_{91})$, $\frac{1}{2}(R_1 + R_{23} + R_{92})$.

(11) $\text{nd}(Y_{11}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_0 + R_{16})$, $\frac{1}{2}(R_0 + R_{19})$, $\frac{1}{2}(R_2 + R_{11})$, $\frac{1}{2}(R_3 + R_9)$, $\frac{1}{2}(R_7 + R_{22})$, $\frac{1}{2}(R_{11} + R_{12})$, $\frac{1}{2}(R_{11} + R_{21})$, $\frac{1}{2}(R_1 + R_{17})$, $\frac{1}{2}(R_0 + R_7 + R_{11})$.

(12) $\text{nd}(Y_{12}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_{21})$, $\frac{1}{2}(R_2 + R_{28})$, $\frac{1}{2}(R_4 + R_{29})$, $\frac{1}{2}(R_5 + R_{30})$, $\frac{1}{2}(R_9 + R_{15})$, $\frac{1}{2}(R_0 + R_5 + R_{29})$, $\frac{1}{2}(R_3 + R_5 + R_7)$, $\frac{1}{2}(R_0 + R_7 + R_1 + R_9)$, $\frac{1}{2}(R_1 + R_2 + R_5 + R_7)$, $\frac{1}{2}(R_1 + R_7 + R_5 + R_{28})$.

(13) $\text{nd}(Y_{13}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{19})$, $\frac{1}{2}(R_3 + R_9)$, $\frac{1}{2}(R_0 + R_1 + R_2 + R_8)$, $\frac{1}{2}(R_0 + R_1 + R_{17} + R_3)$, $\frac{1}{2}(R_0 + R_1 + R_{17} + R_9)$, $\frac{1}{2}(R_0 + R_1 + R_{18} + R_8)$, $\frac{1}{2}(R_0 + R_6 + R_{17} + R_8)$, $\frac{1}{2}(R_0 + R_7 + R_{17} + R_8)$, $\frac{1}{2}(R_1 + R_{10} + R_8 + R_{17})$, $\frac{1}{2}(R_1 + R_{16} + R_8 + R_{17})$.

(14) $\text{nd}(Y_{14}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{30})$, $\frac{1}{2}(R_1 + R_8)$, $\frac{1}{2}(R_2 + R_{25})$, $\frac{1}{2}(R_3 + R_{10})$, $\frac{1}{2}(R_{10} + R_{24})$, $\frac{1}{2}(R_{11} +$

R_{25}), $\frac{1}{2}(R_{12} + R_{25})$, $\frac{1}{2}(R_{13} + R_{25})$, $\frac{1}{2}(R_{25} + R_{31})$.

(15) $\text{nd}(Y_{15}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_0 + R_{16})$, $\frac{1}{2}(R_0 + R_{65})$, $\frac{1}{2}(R_1 + R_{15})$, $\frac{1}{2}(R_2 + R_{86})$, $\frac{1}{2}(R_8 + R_{47})$, $\frac{1}{2}(R_0 + R_{66})$, $\frac{1}{2}(R_2 + R_{19})$, $\frac{1}{2}(R_2 + R_{87})$, $(R_0 + R_{15})$.

(16) $\text{nd}(Y_{16}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_{10} + R_{21})$, $\frac{1}{2}(R_{12} + R_{18})$, $\frac{1}{2}(R_1 + R_{20})$, $\frac{1}{2}(R_2 + R_{10})$, $\frac{1}{2}(R_2 + R_{21})$, $\frac{1}{2}(R_3 + R_{15})$, $\frac{1}{2}(R_{11} + R_{20})$, $\frac{1}{2}(R_{12} + R_{50})$, $\frac{1}{2}(R_{13} + R_{15})$.

(17) $\text{nd}(Y_{17}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{18})$, $\frac{1}{2}(R_0 + R_{24})$, $\frac{1}{2}(R_0 + R_{25})$, $\frac{1}{2}(R_1 + R_{17})$, $\frac{1}{2}(R_3 + R_{19})$, $\frac{1}{2}(R_{17} + R_{20})$, $\frac{1}{2}(R_{17} + R_{27})$, $\frac{1}{2}(R_{19} + R_{21})$, $\frac{1}{2}(R_{19} + R_{23})$, $\frac{1}{2}(R_0 + R_{17} + R_{19})$.

(18) $\text{nd}(Y_{18}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{17})$, $\frac{1}{2}(R_2 + R_{18})$, $\frac{1}{2}(R_{17} + R_{25})$, $\frac{1}{2}(R_4 + R_{11})$, $\frac{1}{2}(R_8 + R_{10})$, $\frac{1}{2}(R_8 + R_{12})$, $\frac{1}{2}(R_1 + R_3 + R_{17})$, $\frac{1}{2}(R_1 + R_5 + R_8)$, $\frac{1}{2}(R_3 + R_4 + R_5)$, $\frac{1}{2}(R_4 + R_8 + R_{17})$.

(19) $\text{nd}(Y_{19}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{17})$, $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{22})$, $\frac{1}{2}(R_1 + R_{18})$, $\frac{1}{2}(R_3 + R_6)$, $\frac{1}{2}(R_5 + R_{15})$, $\frac{1}{2}(R_1 + R_{19})$, $\frac{1}{2}(R_3 + R_{25})$, $\frac{1}{2}(R_7 + R_{27})$, $\frac{1}{2}(R_1 + R_3 + R_7)$.

(20) $\text{nd}(Y_{20}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_{27})$, $\frac{1}{2}(R_3 + R_{19})$, $\frac{1}{2}(R_6 + R_{20})$, $\frac{1}{2}(R_{10} + R_{14})$, $\frac{1}{2}(R_{14} + R_{21})$, $\frac{1}{2}(R_{19} + R_{22})$, $\frac{1}{2}(R_4 + R_{23})$, $\frac{1}{2}(R_7 + R_{11})$, $\frac{1}{2}(R_2 + R_{11} + R_{14})$, $\frac{1}{2}(R_1 + R_5 + R_{14} + R_9)$.

(21) $\text{nd}(Y_{21}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{17})$, $\frac{1}{2}(R_0 + R_{26})$, $\frac{1}{2}(R_4 + R_{27})$, $\frac{1}{2}(R_6 + R_{19})$, $\frac{1}{2}(R_0 + R_9 + R_4 + R_{12})$, $\frac{1}{2}(R_0 + R_{10} + R_1 + R_{12})$, $\frac{1}{2}(R_0 + R_{11} + R_2 + R_{12})$, $\frac{1}{2}(R_1 + R_9 + R_2 + R_{12})$, $\frac{1}{2}(R_1 + R_{11} + R_4 + R_{12})$, $\frac{1}{2}(R_2 + R_{10} + R_4 + R_{12})$.

(22) $\text{nd}(Y_{22}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{31})$, $\frac{1}{2}(R_1 + R_{18})$, $\frac{1}{2}(R_1 + R_{27})$, $\frac{1}{2}(R_2 + R_{26})$, $\frac{1}{2}(R_{20} + R_{31})$, $\frac{1}{2}(R_{21} + R_{24})$, $\frac{1}{2}(R_3 + R_{32})$, $\frac{1}{2}(R_4 + R_{24})$, $\frac{1}{2}(R_1 + R_3 + R_{24})$.

(23) $\text{nd}(Y_{23}) = 10$. Sequence: $\frac{1}{2}(R_{12} + R_{15})$, $\frac{1}{2}(R_0 + R_3 + R_6)$, $\frac{1}{2}(R_0 + R_4 + R_{13})$, $\frac{1}{2}(R_0 + R_5 + R_{14})$, $\frac{1}{2}(R_0 + R_9 + R_{11})$, $\frac{1}{2}(R_1 + R_5 + R_9)$, $\frac{1}{2}(R_2 + R_4 + R_{14})$, $\frac{1}{2}(R_2 + R_5 + R_{13})$, $\frac{1}{2}(R_0 + R_3 + R_{12} + R_9)$, $\frac{1}{2}(R_1 + R_2 + R_7 + R_{12})$.

(24) $\text{nd}(Y_{24}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_8)$, $\frac{1}{2}(R_5 + R_{14})$, $\frac{1}{2}(R_{11} + R_{12})$, $\frac{1}{2}(R_0 + R_3 + R_2 + R_7)$, $\frac{1}{2}(R_0 + R_4 + R_2 + R_{14})$, $\frac{1}{2}(R_1 + R_{10} + R_6 + R_{12})$, $\frac{1}{2}(R_0 + R_3 + R_{12} + R_1 + R_4)$, $\frac{1}{2}(R_0 + R_4 + R_1 + R_{10} + R_7)$, $\frac{1}{2}(R_1 + R_4 + R_2 + R_3 + R_{10})$, $\frac{1}{2}(R_1 + R_4 + R_2 + R_7 + R_{12})$.

(25) $\text{nd}(Y_{25}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{40})$, $\frac{1}{2}(R_1 + R_{14})$, $\frac{1}{2}(R_1 + R_{15})$, $\frac{1}{2}(R_1 + R_{31})$, $\frac{1}{2}(R_1 + R_{63})$, $\frac{1}{2}(R_1 + R_{77})$, $\frac{1}{2}(R_4 + R_{72})$, $\frac{1}{2}(R_6 + R_{42})$, $(R_0 + R_7)$.

(27) $\text{nd}(Y_{27}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{14})$, $\frac{1}{2}(R_0 + R_{22})$, $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_1 + R_{21})$, $\frac{1}{2}(R_1 + R_{24})$, $\frac{1}{2}(R_2 + R_{16})$, $\frac{1}{2}(R_2 + R_{28})$, $\frac{1}{2}(R_3 + R_{19})$, $\frac{1}{2}(R_4 + R_8)$, $\frac{1}{2}(R_{10} + R_{12})$.

(28) $\text{nd}(Y_{28}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_1 + R_{17})$, $\frac{1}{2}(R_1 + R_{18})$, $\frac{1}{2}(R_2 + R_{16})$, $\frac{1}{2}(R_2 + R_{19})$, $\frac{1}{2}(R_2 + R_{28})$, $\frac{1}{2}(R_4 + R_9)$, $\frac{1}{2}(R_7 + R_8)$.

(29) $\text{nd}(Y_{29}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{21})$, $\frac{1}{2}(R_0 + R_{45})$, $\frac{1}{2}(R_0 + R_{51})$, $\frac{1}{2}(R_1 + R_{46})$, $\frac{1}{2}(R_1 + R_{50})$, $\frac{1}{2}(R_2 + R_{27})$, $\frac{1}{2}(R_3 + R_{30})$, $\frac{1}{2}(R_3 + R_{47})$, $\frac{1}{2}(R_5 + R_{48})$, $\frac{1}{2}(R_4 + R_{36})$.

(30) $\text{nd}(Y_{30}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_{42})$, $\frac{1}{2}(R_2 + R_{17})$, $\frac{1}{2}(R_5 + R_{54})$, $\frac{1}{2}(R_8 + R_{38})$, $\frac{1}{2}(R_8 + R_{55})$, $\frac{1}{2}(R_{13} + R_{52})$, $\frac{1}{2}(R_{26} + R_{41})$, $\frac{1}{2}(R_{37} + R_{52})$, $\frac{1}{2}(R_{42} + R_{51})$, $\frac{1}{2}(R_8 + R_{42} + R_{52})$.

(31) $\text{nd}(Y_{31}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{21})$, $\frac{1}{2}(R_0 + R_{27})$, $\frac{1}{2}(R_1 + R_{23})$, $\frac{1}{2}(R_1 + R_{25})$, $\frac{1}{2}(R_2 + R_{22})$, $\frac{1}{2}(R_2 + R_{26})$, $\frac{1}{2}(R_4 + R_{31})$, $\frac{1}{2}(R_9 + R_{31})$, $\frac{1}{2}(R_2 + R_6 + R_{12})$.

(32) $\text{nd}(Y_{32}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2)$, $\frac{1}{2}(R_1 + R_{17})$, $\frac{1}{2}(R_1 + R_{29})$, $\frac{1}{2}(R_1 + R_5)$, $\frac{1}{2}(R_1 + R_6)$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_{11} + R_{33})$, $\frac{1}{2}(R_{13} + R_{21})$, $\frac{1}{2}(R_{14} + R_{22})$, $\frac{1}{2}(R_1 + R_{18})$.

(33) $\text{nd}(Y_{33}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{29})$, $\frac{1}{2}(R_0 + R_{41})$, $\frac{1}{2}(R_{17} + R_{24})$, $\frac{1}{2}(R_1 + R_6)$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_1 + R_{11})$, $\frac{1}{2}(R_1 + R_{13})$, $\frac{1}{2}(R_1 + R_{25})$, $\frac{1}{2}(R_1 + R_{27})$, $\frac{1}{2}(R_1 + R_8)$.

(34) $\text{nd}(Y_{34}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{38})$, $\frac{1}{2}(R_1 + R_{21})$, $\frac{1}{2}(R_5 + R_{11})$, $\frac{1}{2}(R_6 + R_{21})$, $\frac{1}{2}(R_{11} + R_{22})$, $\frac{1}{2}(R_{14} + R_{21})$, $\frac{1}{2}(R_{21} + R_{33})$, $\frac{1}{2}(R_{21} + R_{39})$, $\frac{1}{2}(R_7 + R_{21})$, $\frac{1}{2}(R_{23} + R_{30})$.

(35) $\text{nd}(Y_{35}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{25})$, $\frac{1}{2}(R_0 + R_{34})$, $\frac{1}{2}(R_2 + R_{27})$, $\frac{1}{2}(R_2 + R_{29})$, $\frac{1}{2}(R_3 + R_{22})$, $\frac{1}{2}(R_3 + R_{33})$, $\frac{1}{2}(R_0 + R_{26})$, $\frac{1}{2}(R_1 + R_{30})$, $\frac{1}{2}(R_1 + R_{32})$, $\frac{1}{2}(R_0 + R_2 + R_3)$.

- (36) $\text{nd}(Y_{36}) = 10$. Sequence: $(R_2 + R_4)$, $\frac{1}{2}(R_0 + R_8 + R_9)$, $\frac{1}{2}(R_0 + R_{10} + R_{11})$, $\frac{1}{2}(R_0 + R_{12} + R_{13})$, $\frac{1}{2}(R_0 + R_{14} + R_{15})$, $\frac{1}{2}(R_1 + R_{13} + R_{14})$, $\frac{1}{2}(R_2 + R_{10} + R_{12})$, $\frac{1}{2}(R_2 + R_{11} + R_{13})$, $\frac{1}{2}(R_0 + R_{10} + R_2 + R_{13})$, $\frac{1}{2}(R_1 + R_2 + R_5 + R_3)$.
- (37) $\text{nd}(Y_{37}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_1)$, $\frac{1}{2}(R_0 + R_8)$, $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{13})$, $\frac{1}{2}(R_0 + R_{21})$, $\frac{1}{2}(R_0 + R_{24})$, $(R_0 + R_{16})$, $\frac{1}{2}(R_2 + R_6 + R_{22})$, $\frac{1}{2}(R_2 + R_{14} + R_{17})$, $\frac{1}{2}(R_6 + R_{12} + R_{17})$.
- (38) $\text{nd}(Y_{38}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_1)$, $\frac{1}{2}(R_0 + R_2)$, $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_0 + R_{13})$, $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{10})$, $\frac{1}{2}(R_{17} + R_{21})$, $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_3 + R_5 + R_4 + R_{11})$, $\frac{1}{2}(R_6 + R_8 + R_7 + R_{14})$.
- (39) $\text{nd}(Y_{39}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{27})$, $\frac{1}{2}(R_0 + R_{29})$, $\frac{1}{2}(R_1 + R_{18})$, $\frac{1}{2}(R_1 + R_{23})$, $\frac{1}{2}(R_1 + R_{31})$, $\frac{1}{2}(R_2 + R_{25})$, $\frac{1}{2}(R_3 + R_{22})$, $\frac{1}{2}(R_3 + R_{26})$, $\frac{1}{2}(R_0 + R_1 + R_3)$.
- (40) $\text{nd}(Y_{40}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{19})$, $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{33})$, $\frac{1}{2}(R_1 + R_{29})$, $\frac{1}{2}(R_1 + R_{30})$, $\frac{1}{2}(R_2 + R_{21})$, $\frac{1}{2}(R_2 + R_{28})$, $\frac{1}{2}(R_3 + R_{32})$, $\frac{1}{2}(R_4 + R_{25})$, $\frac{1}{2}(R_0 + R_2 + R_6)$.
- (41) $\text{nd}(Y_{41}) = 10$. Sequence: $(R_1 + R_5)$, $(R_3 + R_7)$, $\frac{1}{2}(R_0 + R_7 + R_8)$, $\frac{1}{2}(R_1 + R_2 + R_6)$, $\frac{1}{2}(R_1 + R_9 + R_{12})$, $\frac{1}{2}(R_1 + R_{10} + R_{11})$, $\frac{1}{2}(R_2 + R_7 + R_{12})$, $\frac{1}{2}(R_6 + R_7 + R_9)$, $\frac{1}{2}(R_0 + R_{11} + R_{12})$, $\frac{1}{2}(R_1 + R_6 + R_7 + R_{12})$.
- (42) $\text{nd}(Y_{42}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{19})$, $\frac{1}{2}(R_1 + R_{13})$, $(R_0 + R_6)$, $\frac{1}{2}(R_0 + R_1 + R_2 + R_5)$, $\frac{1}{2}(R_0 + R_1 + R_2 + R_{10})$, $\frac{1}{2}(R_0 + R_1 + R_4 + R_3)$, $\frac{1}{2}(R_0 + R_1 + R_{16} + R_7)$, $\frac{1}{2}(R_0 + R_3 + R_2 + R_7)$, $\frac{1}{2}(R_1 + R_2 + R_3 + R_{16})$, $\frac{1}{2}(R_1 + R_2 + R_7 + R_4)$.
- (43) $\text{nd}(Y_{43}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_2 + R_{15})$, $\frac{1}{2}(R_2 + R_{14} \cdot H_0)$, $\frac{1}{2}(R_1 \cdot H_4 + R_7 \cdot H_4)$, $\frac{1}{2}(R_{14} + R_{15} \cdot H_0)$, $\frac{1}{2}(R_0 + R_{10} + R_{10} \cdot H_0)$, $\frac{1}{2}(R_0 + R_{10} + R_{13} \cdot H_0)$, $\frac{1}{2}(R_0 + R_{12} + R_{11} \cdot H_0)$, $\frac{1}{2}(R_0 + R_{12} + R_{12} \cdot H_0)$, $\frac{1}{2}(R_2 + R_7 + R_7 \cdot H_4)$.
- (44) $\text{nd}(Y_{44}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{29})$, $\frac{1}{2}(R_4 + R_{34})$, $\frac{1}{2}(R_6 + R_{47})$, $\frac{1}{2}(R_{10} + R_{46})$, $\frac{1}{2}(R_{14} + R_{23})$, $\frac{1}{2}(R_{34} + R_{35})$, $\frac{1}{2}(R_5 + R_{29} + R_{36})$, $\frac{1}{2}(R_6 + R_{22} + R_{36})$, $\frac{1}{2}(R_{10} + R_{14} + R_{34})$, $\frac{1}{2}(R_{14} + R_{34} + R_{46})$.
- (45) $\text{nd}(Y_{45}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{11} + R_{14})$, $\frac{1}{2}(R_1 + R_6 + R_{13})$, $\frac{1}{2}(R_2 + R_6 + R_{12})$, $\frac{1}{2}(R_3 + R_5 + R_{12})$, $\frac{1}{2}(R_4 + R_5 + R_{13})$, $\frac{1}{2}(R_5 + R_{10} + R_{14})$, $\frac{1}{2}(R_6 + R_9 + R_{14})$, $\frac{1}{2}(R_7 + R_{11} + R_{13})$, $\frac{1}{2}(R_0 + R_7 + R_{13} + R_{14})$, $\frac{1}{2}(R_2 + R_3 + R_5 + R_6)$.
- (46) $\text{nd}(Y_{46}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_7 + R_6 + R_{11})$, $\frac{1}{2}(R_0 + R_8 + R_6 + R_9)$, $\frac{1}{2}(R_3 + R_8 + R_{10} + R_9)$, $\frac{1}{2}(R_0 + R_7 + R_4 + R_1 + R_3 + R_9)$, $\frac{1}{2}(R_0 + R_7 + R_4 + R_2 + R_3 + R_8)$, $\frac{1}{2}(R_0 + R_8 + R_3 + R_1 + R_4 + R_{11})$, $\frac{1}{2}(R_0 + R_9 + R_3 + R_2 + R_4 + R_{11})$, $\frac{1}{2}(R_1 + R_2 + R_7 + R_{11} + 2R_4)$, $\frac{1}{2}(R_1 + R_2 + R_8 + R_9 + 2R_3)$, $\frac{1}{2}(R_7 + R_8 + R_9 + R_{11} + 2R_0)$.
- (47) $\text{nd}(Y_{47}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_4 + R_1 + R_5 + R_2 + R_7)$, $\frac{1}{2}(R_0 + R_4 + R_1 + R_9 + R_6 + R_8)$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_2 + R_5 + R_8)$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_6 + R_9 + R_7)$, $\frac{1}{2}(R_0 + R_7 + R_2 + R_3 + R_6 + R_8)$, $\frac{1}{2}(R_0 + R_7 + R_9 + R_1 + R_5 + R_8)$, $\frac{1}{2}(R_1 + R_4 + R_3 + R_2 + R_7 + R_9)$, $\frac{1}{2}(R_1 + R_4 + R_3 + R_6 + R_8 + R_5)$, $\frac{1}{2}(R_1 + R_5 + R_2 + R_3 + R_6 + R_9)$, $\frac{1}{2}(R_2 + R_5 + R_8 + R_6 + R_9 + R_7)$.
- (50) $\text{nd}(Y_{50}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{21})$, $\frac{1}{2}(R_0 + R_{27})$, $\frac{1}{2}(R_1 + R_{18})$, $\frac{1}{2}(R_3 + R_{39})$, $\frac{1}{2}(R_6 + R_{33})$, $\frac{1}{2}(R_{14} + R_{33})$, $\frac{1}{2}(R_{17} + R_{39})$, $\frac{1}{2}(R_{18} + R_{25})$, $\frac{1}{2}(R_2 + R_{19})$.
- (51) $\text{nd}(Y_{51}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{20})$, $\frac{1}{2}(R_0 + R_{31})$, $\frac{1}{2}(R_0 + R_{34})$, $\frac{1}{2}(R_1 + R_{19})$, $\frac{1}{2}(R_1 + R_{32})$, $\frac{1}{2}(R_2 + R_{24})$, $\frac{1}{2}(R_3 + R_{35})$, $\frac{1}{2}(R_4 + R_{29})$, $\frac{1}{2}(R_5 + R_{22})$, $\frac{1}{2}(R_2 + R_{40})$.
- (52) $\text{nd}(Y_{52}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_8)$, $\frac{1}{2}(R_0 + R_{14})$, $\frac{1}{2}(R_0 + R_{47})$, $\frac{1}{2}(R_0 + R_{63})$, $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_2 + R_7)$, $\frac{1}{2}(R_4 + R_{13})$, $\frac{1}{2}(R_7 + R_{44})$, $\frac{1}{2}(R_7 + R_{62})$, $\frac{1}{2}(R_{45} + R_{65})$.
- (54) $\text{nd}(Y_{54}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_0 + R_{27})$, $\frac{1}{2}(R_0 + R_{28})$, $\frac{1}{2}(R_1 + R_{25})$, $\frac{1}{2}(R_1 + R_{26})$, $\frac{1}{2}(R_2 + R_{22})$, $\frac{1}{2}(R_3 + R_{30})$, $\frac{1}{2}(R_3 + R_{16})$, $\frac{1}{2}(R_8 + R_{33})$, $\frac{1}{2}(R_1 + R_3 + R_{10})$.
- (55) $\text{nd}(Y_{55}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_1)$, $\frac{1}{2}(R_0 + R_7)$, $\frac{1}{2}(R_0 + R_{12})$, $\frac{1}{2}(R_0 + R_8)$, $\frac{1}{2}(R_0 + R_{11})$, $\frac{1}{2}(R_0 + R_{16})$, $\frac{1}{2}(R_0 + R_{24})$, $\frac{1}{2}(R_{14} + R_{22})$, $\frac{1}{2}(R_2 + R_4 + R_9)$, $\frac{1}{2}(R_4 + R_5 + R_{10})$.
- (56) $\text{nd}(Y_{56}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_4)$, $\frac{1}{2}(R_0 + R_{13})$, $\frac{1}{2}(R_0 + R_{15})$, $\frac{1}{2}(R_0 + R_{16})$, $\frac{1}{2}(R_0 + R_{25})$, $\frac{1}{2}(R_0 + R_{26})$, $\frac{1}{2}(R_0 + R_6)$, $\frac{1}{2}(R_1 + R_{32})$, $\frac{1}{2}(R_2 + R_{21})$, $\frac{1}{2}(R_1 + R_3 + R_8 + R_7)$.
- (58) $\text{nd}(Y_{58}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{25})$, $\frac{1}{2}(R_0 + R_{37})$, $\frac{1}{2}(R_3 + R_{38})$, $\frac{1}{2}(R_4 + R_{31})$, $\frac{1}{2}(R_0 + R_{33})$, $\frac{1}{2}(R_1 + R_{23})$, $\frac{1}{2}(R_1 + R_{36})$, $\frac{1}{2}(R_2 + R_{28})$, $\frac{1}{2}(R_1 + R_{34})$, $\frac{1}{2}(R_0 + R_1 + R_5)$.

- (59) $\text{nd}(Y_{59}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{25}), \frac{1}{2}(R_0 + R_{31}), \frac{1}{2}(R_2 + R_{38}), \frac{1}{2}(R_3 + R_{32}), \frac{1}{2}(R_4 + R_{39}), \frac{1}{2}(R_5 + R_{29}), \frac{1}{2}(R_0 + R_{37}), \frac{1}{2}(R_1 + R_{23}), \frac{1}{2}(R_1 + R_{33}), \frac{1}{2}(R_0 + R_3 + R_6)$.
- (60) $\text{nd}(Y_{60}) = 10$. Sequence: $(R_0 + R_{12}), (R_2 + R_{11}), \frac{1}{2}(R_1 + R_4 + R_7), \frac{1}{2}(R_1 + R_5 + R_{15}), \frac{1}{2}(R_1 + R_6 + R_{16}), \frac{1}{2}(R_1 + R_{10} + R_{13}), \frac{1}{2}(R_2 + R_6 + R_{10}), \frac{1}{2}(R_3 + R_5 + R_{16}), \frac{1}{2}(R_5 + R_9 + R_{13}), \frac{1}{2}(R_1 + R_5 + R_3 + R_6)$.
- (61) $\text{nd}(Y_{61}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_1), \frac{1}{2}(R_0 + R_9), \frac{1}{2}(R_0 + R_{10}), \frac{1}{2}(R_0 + R_{16}), \frac{1}{2}(R_0 + R_{21}), \frac{1}{2}(R_0 + R_{22}), (R_0 + R_{13}), \frac{1}{2}(R_2 + R_5 + R_{11}), \frac{1}{2}(R_2 + R_8 + R_{24}), \frac{1}{2}(R_7 + R_{13} + R_{18})$.
- (62) $\text{nd}(Y_{62}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{14}), \frac{1}{2}(R_2 + R_{17}), \frac{1}{2}(R_2 + R_3), \frac{1}{2}(R_2 + R_4), \frac{1}{2}(R_2 + R_{15}), \frac{1}{2}(R_2 + R_{16}), \frac{1}{2}(R_2 + R_{11}), \frac{1}{2}(R_2 + R_{12}), \frac{1}{2}(R_5 + R_7 + R_6 + R_{13}), \frac{1}{2}(R_7 + R_9 + R_{13} + R_{10})$.
- (63) $\text{nd}(Y_{63}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{11}), \frac{1}{2}(R_0 + R_{15}), \frac{1}{2}(R_0 + R_{20}), \frac{1}{2}(R_7 + R_{19}), \frac{1}{2}(R_6 + R_{13}), \frac{1}{2}(R_9 + R_{18}), (R_0 + R_{17}), \frac{1}{2}(R_1 + R_9 + R_5 + R_3 + R_{16}), \frac{1}{2}(R_1 + R_9 + R_5 + R_4 + R_{17}), \frac{1}{2}(R_3 + R_4 + R_8 + R_9 + 2R_5)$.
- (64) $\text{nd}(Y_{64}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{25}), \frac{1}{2}(R_0 + R_{33}), \frac{1}{2}(R_2 + R_{29}), \frac{1}{2}(R_2 + R_{32}), \frac{1}{2}(R_4 + R_{21}), \frac{1}{2}(R_4 + R_{36}), \frac{1}{2}(R_0 + R_{26}), \frac{1}{2}(R_1 + R_{30}), \frac{1}{2}(R_7 + R_{39}), \frac{1}{2}(R_2 + R_7 + R_8)$.
- (65) $\text{nd}(Y_{65}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{24}), \frac{1}{2}(R_0 + R_{30}), \frac{1}{2}(R_0 + R_{31}), \frac{1}{2}(R_1 + R_{29}), \frac{1}{2}(R_1 + R_{32}), \frac{1}{2}(R_2 + R_{28}), \frac{1}{2}(R_3 + R_{33}), \frac{1}{2}(R_5 + R_{39}), \frac{1}{2}(R_{13} + R_{39}), \frac{1}{2}(R_1 + R_{10} + R_{21})$.
- (66) $\text{nd}(Y_{66}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2), \frac{1}{2}(R_2 + R_{19}), \frac{1}{2}(R_2 + R_{21}), \frac{1}{2}(R_2 + R_7), \frac{1}{2}(R_2 + R_{10}), \frac{1}{2}(R_2 + R_{22}), \frac{1}{2}(R_6 + R_{12} + R_{13}), \frac{1}{2}(R_6 + R_{15} + R_{18}), \frac{1}{2}(R_{12} + R_{15} + R_{16}), (R_6 + R_{12} + R_{15})$.
- (67) $\text{nd}(Y_{67}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{30}), \frac{1}{2}(R_2 + R_{33}), \frac{1}{2}(R_1 + R_9), \frac{1}{2}(R_1 + R_{10}), \frac{1}{2}(R_1 + R_{15}), \frac{1}{2}(R_1 + R_{17}), \frac{1}{2}(R_1 + R_{18}), \frac{1}{2}(R_1 + R_{24}), \frac{1}{2}(R_1 + R_{31}), \frac{1}{2}(R_2 + R_5 + R_{16} + R_7)$.
- (68) $\text{nd}(Y_{68}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_2), \frac{1}{2}(R_0 + R_8), \frac{1}{2}(R_0 + R_{27}), \frac{1}{2}(R_0 + R_9), \frac{1}{2}(R_0 + R_{15}), \frac{1}{2}(R_0 + R_{17}), \frac{1}{2}(R_0 + R_{24}), \frac{1}{2}(R_1 + R_{16}), \frac{1}{2}(R_3 + R_{26}), \frac{1}{2}(R_3 + R_4 + R_5 + R_{12})$.
- (69) $\text{nd}(Y_{69}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{33}), \frac{1}{2}(R_0 + R_{34}), \frac{1}{2}(R_0 + R_{44}), \frac{1}{2}(R_1 + R_{38}), \frac{1}{2}(R_1 + R_{42}), \frac{1}{2}(R_2 + R_{39}), \frac{1}{2}(R_2 + R_{41}), \frac{1}{2}(R_3 + R_{36}), \frac{1}{2}(R_4 + R_{43}), \frac{1}{2}(R_0 + R_3 + R_4)$.
- (70) $\text{nd}(Y_{70}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{31}), \frac{1}{2}(R_0 + R_{32}), \frac{1}{2}(R_0 + R_{45}), \frac{1}{2}(R_1 + R_{41}), \frac{1}{2}(R_1 + R_{42}), \frac{1}{2}(R_2 + R_{33}), \frac{1}{2}(R_2 + R_{40}), \frac{1}{2}(R_3 + R_{44}), \frac{1}{2}(R_4 + R_{37}), \frac{1}{2}(R_0 + R_2 + R_6)$.
- (71) $\text{nd}(Y_{71}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_3), \frac{1}{2}(R_2 + R_9), \frac{1}{2}(R_2 + R_{15}), (R_2 + R_4), \frac{1}{2}(R_0 + R_{11} + R_4 + R_{12}), \frac{1}{2}(R_0 + R_{13} + R_1 + R_{14}), \frac{1}{2}(R_1 + R_6 + R_4 + R_7), \frac{1}{2}(R_1 + R_8 + R_{10} + R_{14}), \frac{1}{2}(R_4 + R_5 + R_8 + R_7), \frac{1}{2}(R_4 + R_6 + R_{14} + R_{11})$.
- (72) $\text{nd}(Y_{72}) = 10$. Sequence: $\frac{1}{2}(R_{10} + R_{11}), (R_0 + R_{11}), \frac{1}{2}(R_0 + R_7 + R_6 + R_{13}), \frac{1}{2}(R_0 + R_8 + R_6 + R_9), \frac{1}{2}(R_0 + R_7 + R_4 + R_1 + R_3 + R_9), \frac{1}{2}(R_0 + R_7 + R_5 + R_1 + R_{12} + R_9), \frac{1}{2}(R_1 + R_3 + R_9 + R_6 + R_7 + R_5), \frac{1}{2}(R_1 + R_4 + R_7 + R_6 + R_9 + R_{12}), \frac{1}{2}(R_0 + R_3 + R_6 + R_{12} + 2R_9), \frac{1}{2}(R_0 + R_4 + R_5 + R_6 + 2R_7)$.
- (73) $\text{nd}(Y_{73}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2), \frac{1}{2}(R_1 + R_3), \frac{1}{2}(R_1 + R_{16}), \frac{1}{2}(R_1 + R_{17}), \frac{1}{2}(R_1 + R_{13}), \frac{1}{2}(R_1 + R_{14}), \frac{1}{2}(R_1 + R_{19}), \frac{1}{2}(R_0 + R_{10} + R_9 + R_{18}), \frac{1}{2}(R_0 + R_{11} + R_9 + R_{12}), \frac{1}{2}(R_6 + R_{11} + R_{15} + R_{12})$.
- (74) $\text{nd}(Y_{74}) = 10$. Sequence: $(R_3 + R_6), \frac{1}{2}(R_0 + R_4 + R_1 + R_5 + R_2 + R_8), \frac{1}{2}(R_0 + R_4 + R_1 + R_{10} + R_7 + R_9), \frac{1}{2}(R_0 + R_4 + R_3 + R_2 + R_5 + R_9), \frac{1}{2}(R_0 + R_4 + R_3 + R_7 + R_{10} + R_8), \frac{1}{2}(R_0 + R_8 + R_2 + R_3 + R_7 + R_9), \frac{1}{2}(R_1 + R_4 + R_3 + R_2 + R_8 + R_{10}), \frac{1}{2}(R_1 + R_4 + R_3 + R_7 + R_9 + R_5), \frac{1}{2}(R_1 + R_5 + R_2 + R_3 + R_7 + R_{10}), \frac{1}{2}(R_2 + R_5 + R_9 + R_7 + R_{10} + R_8)$.
- (75) $\text{nd}(Y_{75}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{28}), \frac{1}{2}(R_0 + R_{29}), \frac{1}{2}(R_0 + R_{42}), \frac{1}{2}(R_1 + R_{38}), \frac{1}{2}(R_1 + R_{39}), \frac{1}{2}(R_2 + R_{30}), \frac{1}{2}(R_2 + R_{37}), \frac{1}{2}(R_3 + R_{41}), \frac{1}{2}(R_4 + R_{34}), \frac{1}{2}(R_0 + R_2 + R_6)$.
- (76) $\text{nd}(Y_{76}) = 10$. Sequence: $(R_0 + R_{12}), (R_1 + R_{14}), (R_5 + R_{10}), \frac{1}{2}(R_0 + R_5 + R_{14}), \frac{1}{2}(R_1 + R_4 + R_8), \frac{1}{2}(R_1 + R_6 + R_{16}), \frac{1}{2}(R_1 + R_7 + R_{17}), \frac{1}{2}(R_1 + R_{11} + R_{13}), \frac{1}{2}(R_4 + R_{12} + R_{17}), \frac{1}{2}(R_6 + R_{10} + R_{13})$.
- (77) $\text{nd}(Y_{77}) = 10$. Sequence: $(R_0 + R_{13}), (R_5 + R_{11}), (R_6 + R_{12}), \frac{1}{2}(R_0 + R_5 + R_{12}), \frac{1}{2}(R_1 + R_6 + R_{16}), \frac{1}{2}(R_1 + R_{11} + R_{14}), \frac{1}{2}(R_2 + R_7 + R_{11}), \frac{1}{2}(R_3 + R_6 + R_{17}), \frac{1}{2}(R_4 + R_{13} + R_{17}), \frac{1}{2}(R_6 + R_{10} + R_{14})$.
- (78) $\text{nd}(Y_{78}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{12}), \frac{1}{2}(R_8 + R_0 \cdot H_0), \frac{1}{2}(R_8 + R_{10} \cdot H_0), \frac{1}{2}(R_9 + R_{11} \cdot H_0), \frac{1}{2}(R_{10} + R_{11} \cdot H_0), \frac{1}{2}(R_2 \cdot H_6 + R_3 \cdot H_6 \cdot H_0), (R_1 + R_{11} \cdot H_0), (R_4 + R_8), \frac{1}{2}(R_0 + R_8 + R_{11} \cdot H_0), \frac{1}{2}(R_1 + R_2 + R_3 + R_4 + 2R_5)$.

- (79) $\text{nd}(Y_{79}) = 10$. Sequence: $(R_0 + R_{14}), (R_1 + R_{13}), \frac{1}{2}(R_0 + R_{10} + R_{11}), \frac{1}{2}(R_0 + R_{12} + R_{13}), \frac{1}{2}(R_1 + R_4 + R_{15}), \frac{1}{2}(R_2 + R_9 + R_{14}), \frac{1}{2}(R_1 + R_8 + R_9), \frac{1}{2}(R_5 + R_8 + R_{14}), \frac{1}{2}(R_6 + R_7 + R_{14}), \frac{1}{2}(R_1 + R_5 + R_{14} + R_9)$.
- (80) $\text{nd}(Y_{80}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_{16}), \frac{1}{2}(R_6 + R_{13}), \frac{1}{2}(R_9 + R_{17}), (R_3 + R_{18}), (R_6 + R_{12}), \frac{1}{2}(R_7 + R_9 + R_{18}), \frac{1}{2}(R_7 + R_{17} + R_{18}), \frac{1}{2}(R_1 + R_3 + R_4 + R_{12}), \frac{1}{2}(R_1 + R_3 + R_5 + R_8), \frac{1}{2}(R_2 + R_3 + R_5 + R_{12})$.
- (81) $\text{nd}(Y_{81}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{22}), \frac{1}{2}(R_1 + R_{23}), (R_0 + R_{21}), \frac{1}{2}(R_0 + R_{13} + R_2 + R_{15}), \frac{1}{2}(R_0 + R_{13} + R_2 + R_{18}), \frac{1}{2}(R_0 + R_{13} + R_3 + R_{14}), \frac{1}{2}(R_0 + R_{13} + R_5 + R_{16}), \frac{1}{2}(R_0 + R_{14} + R_2 + R_{16}), \frac{1}{2}(R_2 + R_{13} + R_3 + R_{16}), \frac{1}{2}(R_2 + R_{13} + R_5 + R_{14})$.
- (82) $\text{nd}(Y_{82}) = 10$. Sequence: $(R_0 + R_3 + R_9), (R_2 + R_6 + R_7), \frac{1}{2}(R_0 + R_9 + R_1 + R_{10}), \frac{1}{2}(R_2 + R_7 + R_{10} + R_8), \frac{1}{2}(R_0 + R_3 + R_6 + R_2 + R_8), \frac{1}{2}(R_0 + R_3 + R_6 + R_7 + R_{10}), \frac{1}{2}(R_0 + R_8 + R_5 + R_4 + R_9), \frac{1}{2}(R_1 + R_4 + R_5 + R_2 + R_7), \frac{1}{2}(R_1 + R_7 + R_6 + R_3 + R_9), \frac{1}{2}(R_2 + R_5 + R_4 + R_9 + R_3 + R_6)$.
- (83) $\text{nd}(Y_{83}) = 10$. Sequence: $(R_0 + R_{10} + R_{11}), \frac{1}{2}(R_0 + R_{10} + R_2 + R_{12}), \frac{1}{2}(R_0 + R_{10} + R_5 + R_{13}), \frac{1}{2}(R_0 + R_{10} + R_8 + R_{14}), \frac{1}{2}(R_0 + R_{11} + R_3 + R_{12}), \frac{1}{2}(R_0 + R_{11} + R_4 + R_{13}), \frac{1}{2}(R_0 + R_{11} + R_7 + R_{14}), \frac{1}{2}(R_1 + R_6 + R_{13} + R_{14}), \frac{1}{2}(R_1 + R_9 + R_{12} + R_{14}), \frac{1}{2}(R_6 + R_9 + R_{12} + R_{13})$.
- (84) $\text{nd}(Y_{84}) \geq 9$. Sequence: $\frac{1}{2}(R_0 + R_0 \cdot H_5), \frac{1}{2}(R_1 + R_5 \cdot H_2 + R_6 + R_1 \cdot H_4), (R_1 + R_5 \cdot H_2 + R_5 + R_1 \cdot H_4), (R_2 + R_3 + R_4 + R_7), \frac{1}{2}(R_0 + R_3 + R_2 + R_7 + R_1 + R_1 \cdot H_4 + R_5), \frac{1}{2}(R_0 + R_3 + R_4 + R_7 + R_1 + R_5 \cdot H_2 + R_5), \frac{1}{2}(R_1 + R_7 + R_2 + R_3 + R_8 + R_5 + R_5 \cdot H_2), \frac{1}{2}(R_1 + R_7 + R_4 + R_3 + R_8 + R_5 + R_1 \cdot H_4), \frac{1}{2}(R_0 + R_8 + R_5 \cdot H_2 + R_1 \cdot H_4 + 2R_5)$.
- (85) $\text{nd}(Y_{85}) \geq 7$. Sequence: $(R_0 + R_3 + R_4 + R_1 + R_8 + R_5), \frac{1}{2}(R_0 + R_3 + R_4 + R_1 + R_8 + R_6 + R_2 + R_9), \frac{1}{2}(R_0 + R_3 + R_4 + R_7 + R_2 + R_6 + R_8 + R_5), \frac{1}{2}(R_0 + R_5 + R_8 + R_1 + R_4 + R_7 + R_2 + R_9), \frac{1}{2}(R_1 + R_6 + R_3 + R_9 + 2R_8 + 2R_5 + 2R_0), \frac{1}{2}(R_1 + R_7 + R_5 + R_9 + 2R_4 + 2R_3 + 2R_0), \frac{1}{2}(R_3 + R_7 + R_5 + R_6 + 2R_4 + 2R_1 + 2R_8)$.
- (91) $\text{nd}(Y_{91}) = 10$. Sequence: $\frac{1}{2}(R_7 + R_{12}), \frac{1}{2}(R_0 + R_7), \frac{1}{2}(R_1 + R_7), \frac{1}{2}(R_7 + R_8), \frac{1}{2}(R_7 + R_{22}), \frac{1}{2}(R_7 + R_{30}), \frac{1}{2}(R_7 + R_{10}), \frac{1}{2}(R_{15} + R_{23}), \frac{1}{2}(R_{16} + R_{24}), \frac{1}{2}(R_6 + R_9 + R_{13})$.
- (95) $\text{nd}(Y_{95}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{26}), \frac{1}{2}(R_1 + R_{24}), \frac{1}{2}(R_2 + R_{30}), \frac{1}{2}(R_3 + R_{32}), \frac{1}{2}(R_0 + R_{37}), \frac{1}{2}(R_4 + R_{35}), \frac{1}{2}(R_0 + R_{39}), \frac{1}{2}(R_1 + R_{41}), \frac{1}{2}(R_2 + R_{43}), \frac{1}{2}(R_0 + R_3 + R_4)$.
- (96) $\text{nd}(Y_{96}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2), \frac{1}{2}(R_2 + R_{10}), \frac{1}{2}(R_2 + R_{16}), \frac{1}{2}(R_2 + R_{20}), \frac{1}{2}(R_2 + R_{22}), \frac{1}{2}(R_2 + R_{23}), (R_2 + R_{19}), \frac{1}{2}(R_3 + R_6 + R_{11}), \frac{1}{2}(R_3 + R_8 + R_{25}), \frac{1}{2}(R_5 + R_8 + R_{24})$.
- (97) $\text{nd}(Y_{97}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_4), \frac{1}{2}(R_1 + R_5), \frac{1}{2}(R_1 + R_{19}), \frac{1}{2}(R_2 + R_{12}), \frac{1}{2}(R_2 + R_{16}), \frac{1}{2}(R_1 + R_{24}), \frac{1}{2}(R_{14} + R_{15}), \frac{1}{2}(R_0 + R_9 + R_8 + R_{23}), \frac{1}{2}(R_0 + R_{10} + R_8 + R_{11}), \frac{1}{2}(R_7 + R_{27} + R_{18} + R_{28})$.
- (98) $\text{nd}(Y_{98}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{29}), \frac{1}{2}(R_0 + R_{34}), \frac{1}{2}(R_1 + R_{31}), \frac{1}{2}(R_3 + R_{25}), \frac{1}{2}(R_4 + R_{16}), \frac{1}{2}(R_5 + R_{15}), \frac{1}{2}(R_0 + R_{32}), \frac{1}{2}(R_4 + R_{39}), \frac{1}{2}(R_8 + R_{43}), \frac{1}{2}(R_0 + R_5 + R_{10})$.
- (99) $\text{nd}(Y_{99}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2), \frac{1}{2}(R_1 + R_8), \frac{1}{2}(R_1 + R_{13}), \frac{1}{2}(R_1 + R_9), \frac{1}{2}(R_1 + R_{19}), \frac{1}{2}(R_1 + R_{20}), \frac{1}{2}(R_3 + R_5 + R_{10}), \frac{1}{2}(R_3 + R_7 + R_{22}), \frac{1}{2}(R_7 + R_{10} + R_{14}), (R_3 + R_7 + R_{10})$.
- (100) $\text{nd}(Y_{100}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{42}), \frac{1}{2}(R_1 + R_{10}), \frac{1}{2}(R_1 + R_{11}), \frac{1}{2}(R_1 + R_{15}), \frac{1}{2}(R_1 + R_{37}), \frac{1}{2}(R_2 + R_8), \frac{1}{2}(R_5 + R_8), \frac{1}{2}(R_8 + R_9), \frac{1}{2}(R_8 + R_{34}), \frac{1}{2}(R_{17} + R_{35})$.
- (101) $\text{nd}(Y_{101}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{35}), \frac{1}{2}(R_0 + R_{36}), \frac{1}{2}(R_0 + R_{48}), \frac{1}{2}(R_1 + R_{44}), \frac{1}{2}(R_1 + R_{47}), \frac{1}{2}(R_2 + R_{37}), \frac{1}{2}(R_2 + R_{43}), \frac{1}{2}(R_3 + R_{49}), \frac{1}{2}(R_5 + R_{33}), \frac{1}{2}(R_0 + R_2 + R_6)$.
- (102) $\text{nd}(Y_{102}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{10}), \frac{1}{2}(R_0 + R_{18}), \frac{1}{2}(R_0 + R_{19}), \frac{1}{2}(R_0 + R_{32}), \frac{1}{2}(R_1 + R_{14}), \frac{1}{2}(R_5 + R_{14}), \frac{1}{2}(R_6 + R_{14}), \frac{1}{2}(R_{14} + R_{30}), \frac{1}{2}(R_2 + R_{22}), \frac{1}{2}(R_4 + R_{38})$.
- (105) $\text{nd}(Y_{105}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_5), \frac{1}{2}(R_2 + R_{19}), \frac{1}{2}(R_3 + R_6), \frac{1}{2}(R_3 + R_{18}), \frac{1}{2}(R_2 + R_{12}), (R_2 + R_{13}), \frac{1}{2}(R_0 + R_{13} + R_7 + R_{15}), \frac{1}{2}(R_1 + R_8 + R_{15} + R_{16}), \frac{1}{2}(R_7 + R_8 + R_{17} + R_{13}), \frac{1}{2}(R_8 + R_{10} + R_{14} + R_{15})$.
- (106) $\text{nd}(Y_{106}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{17}), \frac{1}{2}(R_2 + R_3), \frac{1}{2}(R_2 + R_{14}), \frac{1}{2}(R_2 + R_{15}), \frac{1}{2}(R_2 + R_{21}), \frac{1}{2}(R_2 + R_4), \frac{1}{2}(R_2 + R_{18}), \frac{1}{2}(R_2 + R_{19}), \frac{1}{2}(R_1 + R_{11} + R_{10} + R_{20}), \frac{1}{2}(R_7 + R_{12} + R_{16} + R_{13})$.
- (107) $\text{nd}(Y_{107}) = 10$. Sequence: $\frac{1}{2}(R_{10} + R_{13}), (R_4 + R_{12}), \frac{1}{2}(R_0 + R_8 + R_6 + R_9), \frac{1}{2}(R_3 + R_8 + R_{14} + R_9), \frac{1}{2}(R_0 + R_7 +$

$R_4 + R_1 + R_{14} + R_8$), $\frac{1}{2}(R_0 + R_7 + R_5 + R_1 + R_3 + R_8)$, $\frac{1}{2}(R_1 + R_3 + R_8 + R_6 + R_7 + R_4)$, $\frac{1}{2}(R_1 + R_5 + R_7 + R_6 + R_8 + R_{14})$, $\frac{1}{2}(R_0 + R_4 + R_5 + R_6 + 2R_7)$, $\frac{1}{2}(R_3 + R_4 + R_5 + R_{14} + 2R_1)$.

(109) $\text{nd}(Y_{109}) = 10$. Sequence: $(R_2 + R_6)$, $(R_5 + R_8)$, $\frac{1}{2}(R_0 + R_4 + R_1 + R_5 + R_2 + R_9)$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_2 + R_5 + R_{10})$, $\frac{1}{2}(R_0 + R_9 + R_2 + R_3 + R_7 + R_{10})$, $\frac{1}{2}(R_0 + R_9 + R_{11} + R_1 + R_5 + R_{10})$, $\frac{1}{2}(R_1 + R_4 + R_3 + R_2 + R_9 + R_{11})$, $\frac{1}{2}(R_1 + R_4 + R_3 + R_7 + R_{10} + R_5)$, $\frac{1}{2}(R_1 + R_5 + R_2 + R_3 + R_7 + R_{11})$, $\frac{1}{2}(R_2 + R_5 + R_{10} + R_7 + R_{11} + R_9)$.

(110) $\text{nd}(Y_{110}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{31})$, $\frac{1}{2}(R_0 + R_{40})$, $\frac{1}{2}(R_0 + R_{42})$, $\frac{1}{2}(R_1 + R_{29})$, $\frac{1}{2}(R_1 + R_{35})$, $\frac{1}{2}(R_1 + R_{43})$, $\frac{1}{2}(R_2 + R_{39})$, $\frac{1}{2}(R_3 + R_{34})$, $\frac{1}{2}(R_3 + R_{36})$, $\frac{1}{2}(R_0 + R_1 + R_3)$.

(111) $\text{nd}(Y_{111}) = 10$. Sequence: $(R_2 + R_8)$, $(R_5 + R_{16})$, $(R_7 + R_{18})$, $\frac{1}{2}(R_0 + R_{15} + R_{16})$, $\frac{1}{2}(R_0 + R_{17} + R_{18})$, $\frac{1}{2}(R_1 + R_{15} + R_{18})$, $\frac{1}{2}(R_1 + R_{16} + R_{17})$, $\frac{1}{2}(R_3 + R_{14} + R_{16})$, $\frac{1}{2}(R_9 + R_{13} + R_{18})$, $\frac{1}{2}(R_0 + R_{13} + R_{14})$.

(112) $\text{nd}(Y_{112}) = 10$. Sequence: $(R_0 + R_{16})$, $(R_5 + R_{15})$, $(R_6 + R_{14})$, $\frac{1}{2}(R_0 + R_{14} + R_{15})$, $\frac{1}{2}(R_1 + R_5 + R_{17})$, $\frac{1}{2}(R_1 + R_6 + R_{18})$, $\frac{1}{2}(R_2 + R_6 + R_{10})$, $\frac{1}{2}(R_3 + R_5 + R_{18})$, $\frac{1}{2}(R_3 + R_6 + R_{17})$, $\frac{1}{2}(R_5 + R_9 + R_{13})$.

(113) $\text{nd}(Y_{113}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_1 + R_{23})$, $\frac{1}{2}(R_9 + R_{23})$, $\frac{1}{2}(R_{10} + R_{23})$, $\frac{1}{2}(R_{21} + R_{23})$, $\frac{1}{2}(R_{23} + R_{24})$, $(R_2 + R_{23})$, $\frac{1}{2}(R_2 + R_5 + R_{11})$, $\frac{1}{2}(R_2 + R_7 + R_{25})$, $\frac{1}{2}(R_2 + R_8 + R_{26})$.

(114) $\text{nd}(Y_{114}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_3)$, $\frac{1}{2}(R_2 + R_6)$, $\frac{1}{2}(R_2 + R_7)$, $\frac{1}{2}(R_2 + R_{23})$, $\frac{1}{2}(R_2 + R_{24})$, $\frac{1}{2}(R_2 + R_{27})$, $(R_2 + R_{17})$, $\frac{1}{2}(R_0 + R_{17} + R_{18})$, $\frac{1}{2}(R_1 + R_{20} + R_{21})$, $\frac{1}{2}(R_4 + R_{17} + R_{19})$.

(115) $\text{nd}(Y_{115}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_7)$, $\frac{1}{2}(R_{12} + R_{15})$, $\frac{1}{2}(R_{13} + R_{14})$, $\frac{1}{2}(R_2 + R_3)$, $\frac{1}{2}(R_2 + R_{11})$, $\frac{1}{2}(R_2 + R_{21})$, $\frac{1}{2}(R_2 + R_4)$, $\frac{1}{2}(R_2 + R_{18})$, $\frac{1}{2}(R_2 + R_{16})$, $\frac{1}{2}(R_2 + R_{19})$.

(116) $\text{nd}(Y_{116}) = 10$. Sequence: $(R_0 + R_{16})$, $(R_2 + R_{11})$, $(R_3 + R_{10})$, $\frac{1}{2}(R_0 + R_{10} + R_{11})$, $\frac{1}{2}(R_1 + R_{13} + R_{14})$, $\frac{1}{2}(R_5 + R_{10} + R_{12})$, $\frac{1}{2}(R_0 + R_{12} + R_{13})$, $\frac{1}{2}(R_1 + R_5 + R_8)$, $\frac{1}{2}(R_1 + R_{12} + R_{15})$, $\frac{1}{2}(R_4 + R_9 + R_{16})$.

(117) $\text{nd}(Y_{117}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{35})$, $\frac{1}{2}(R_4 + R_{34})$, $\frac{1}{2}(R_1 + R_8)$, $\frac{1}{2}(R_1 + R_9)$, $\frac{1}{2}(R_1 + R_{14})$, $\frac{1}{2}(R_1 + R_{16})$, $\frac{1}{2}(R_1 + R_{17})$, $\frac{1}{2}(R_1 + R_{30})$, $\frac{1}{2}(R_1 + R_{36})$, $\frac{1}{2}(R_0 + R_{21} + R_{12} + R_{24})$.

(118) $\text{nd}(Y_{118}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_8)$, $\frac{1}{2}(R_2 + R_{10})$, $\frac{1}{2}(R_2 + R_{11})$, $\frac{1}{2}(R_2 + R_{12})$, $\frac{1}{2}(R_0 + R_5 + R_7 + R_{16})$, $\frac{1}{2}(R_3 + R_4 + R_{16} + R_{13})$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_1 + R_{14})$, $\frac{1}{2}(R_0 + R_4 + R_9 + R_6 + R_5)$, $\frac{1}{2}(R_1 + R_{13} + R_7 + R_5 + R_{14})$, $\frac{1}{2}(R_3 + R_9 + R_6 + R_7 + R_{13})$.

(119) $\text{nd}(Y_{119}) = 10$. Sequence: $\frac{1}{2}(R_4 + R_7)$, $\frac{1}{2}(R_4 + R_{12})$, $\frac{1}{2}(R_4 + R_{19})$, $(R_4 + R_6)$, $\frac{1}{2}(R_0 + R_{13} + R_6 + R_{16})$, $\frac{1}{2}(R_0 + R_{14} + R_3 + R_{15})$, $\frac{1}{2}(R_0 + R_{14} + R_9 + R_{17})$, $\frac{1}{2}(R_0 + R_{17} + R_1 + R_{18})$, $\frac{1}{2}(R_1 + R_{11} + R_{15} + R_{17})$, $\frac{1}{2}(R_3 + R_{11} + R_{18} + R_{14})$.

(120) $\text{nd}(Y_{120}) = 10$. Sequence: $\frac{1}{2}(R_3 + R_5)$, $\frac{1}{2}(R_3 + R_{12})$, $\frac{1}{2}(R_3 + R_{19})$, $(R_3 + R_7)$, $\frac{1}{2}(R_0 + R_{13} + R_7 + R_{16})$, $\frac{1}{2}(R_0 + R_{14} + R_4 + R_{15})$, $\frac{1}{2}(R_0 + R_{15} + R_{11} + R_{18})$, $\frac{1}{2}(R_0 + R_{17} + R_1 + R_{18})$, $\frac{1}{2}(R_1 + R_9 + R_{14} + R_{18})$, $\frac{1}{2}(R_4 + R_9 + R_{17} + R_{15})$.

(121) $\text{nd}(Y_{121}) \geq 9$. Sequence: $\frac{1}{2}(R_1 + R_9)$, $\frac{1}{2}(R_9 + R_{10})$, $\frac{1}{2}(R_3 + R_9)$, $\frac{1}{2}(R_9 + R_3 \cdot H_2)$, $\frac{1}{2}(R_{11} + R_{11} \cdot H_0)$, $\frac{1}{2}(R_0 + R_2 + R_4 + R_5 + R_7 + R_8 + R_8 \cdot H_2)$, $\frac{1}{2}(R_0 + R_5 + R_6 + R_7 + R_8 + R_{12} + R_8 \cdot H_2)$, $\frac{1}{2}(R_0 + R_2 + 2R_7 + R_{11} + R_{12})$, $\frac{1}{2}(R_0 + R_4 + 2R_5 + R_6 + R_{11})$.

(122) $\text{nd}(Y_{122}) \geq 7$. Sequence: $\frac{1}{2}(R_2 + R_9)$, $(R_2 + R_7)$, $(R_0 + R_4 + R_5 + R_1 + R_{10} + R_6)$, $\frac{1}{2}(R_0 + R_4 + R_5 + R_1 + R_{10} + R_7 + R_3 + R_{11})$, $\frac{1}{2}(R_0 + R_4 + R_5 + R_8 + R_3 + R_7 + R_{10} + R_6)$, $\frac{1}{2}(R_1 + R_7 + R_4 + R_{11} + 2R_{10} + 2R_6 + 2R_0)$, $\frac{1}{2}(R_4 + R_8 + R_6 + R_7 + 2R_5 + 2R_1 + 2R_{10})$.

(123) $\text{nd}(Y_{123}) \geq 7$. Sequence: $\frac{1}{2}(R_2 + R_3)$, $\frac{1}{2}(R_2 + R_{10})$, $\frac{1}{2}(R_2 + R_{11})$, $(R_2 + R_{12})$, $\frac{1}{2}(R_0 + R_5 + R_6 + R_1 + R_{12} + R_8 + R_4 + R_{13})$, $\frac{1}{2}(R_0 + R_5 + R_6 + R_9 + R_4 + R_8 + R_{12} + R_7)$, $\frac{1}{2}(R_0 + R_7 + R_{12} + R_1 + R_6 + R_9 + R_4 + R_{13})$.

(124) $\text{nd}(Y_{124}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{28})$, $\frac{1}{2}(R_0 + R_{29})$, $\frac{1}{2}(R_0 + R_{43})$, $\frac{1}{2}(R_1 + R_{37})$, $\frac{1}{2}(R_1 + R_{41})$, $\frac{1}{2}(R_2 + R_{38})$, $\frac{1}{2}(R_2 + R_{40})$, $\frac{1}{2}(R_3 + R_{31})$, $\frac{1}{2}(R_6 + R_{42})$, $\frac{1}{2}(R_0 + R_3 + R_6)$.

(125) $\text{nd}(Y_{125}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{30})$, $\frac{1}{2}(R_0 + R_{31})$, $\frac{1}{2}(R_0 + R_{41})$, $\frac{1}{2}(R_1 + R_{37})$, $\frac{1}{2}(R_1 + R_{40})$, $\frac{1}{2}(R_2 + R_{32})$, $\frac{1}{2}(R_2 + R_{36})$, $\frac{1}{2}(R_4 + R_{25})$, $\frac{1}{2}(R_4 + R_{39})$, $\frac{1}{2}(R_0 + R_2 + R_4)$.

(126) $\text{nd}(Y_{126}) = 10$. Sequence: $\frac{1}{2}(R_{13} + R_{20})$, $(R_0 + R_{14})$, $(R_1 + R_7)$, $(R_2 + R_{12})$, $(R_5 + R_{10})$, $\frac{1}{2}(R_0 + R_{12} + R_{13})$, $\frac{1}{2}(R_1 + R_{10} + R_{13})$, $\frac{1}{2}(R_2 + R_5 + R_{15})$, $\frac{1}{2}(R_0 + R_9 + R_4 + R_{10})$, $\frac{1}{2}(R_1 + R_4 + R_9 + R_{12})$.

- (127) $\text{nd}(Y_{127}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{38}), \frac{1}{2}(R_0 + R_{39}), \frac{1}{2}(R_0 + R_{50}), \frac{1}{2}(R_1 + R_{46}), \frac{1}{2}(R_1 + R_{47}), \frac{1}{2}(R_2 + R_{40}), \frac{1}{2}(R_2 + R_{45}), \frac{1}{2}(R_3 + R_{51}), \frac{1}{2}(R_5 + R_{43}), \frac{1}{2}(R_0 + R_2 + R_6)$.
- (128) $\text{nd}(Y_{128}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_7), \frac{1}{2}(R_2 + R_{14}), \frac{1}{2}(R_2 + R_{22}), \frac{1}{2}(R_4 + R_{11}), \frac{1}{2}(R_4 + R_{21}), \frac{1}{2}(R_5 + R_6), \frac{1}{2}(R_5 + R_{23}), \frac{1}{2}(R_6 + R_{23}), \frac{1}{2}(R_{11} + R_{21}), (R_2 + R_{16})$.
- (129) $\text{nd}(Y_{129}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_8), \frac{1}{2}(R_{12} + R_{15}), \frac{1}{2}(R_{13} + R_{14}), (R_0 + R_{15}), (R_1 + R_4), (R_5 + R_{14}), \frac{1}{2}(R_1 + R_{14} + R_{15}), \frac{1}{2}(R_0 + R_9 + R_5 + R_3 + R_{16} + R_{11}), \frac{1}{2}(R_0 + R_9 + R_6 + R_3 + R_4 + R_{11}), \frac{1}{2}(R_3 + R_4 + R_{11} + R_7 + R_9 + R_5)$.
- (130) $\text{nd}(Y_{130}) = 10$. Sequence: $(R_1 + R_{12}), (R_2 + R_{10}), (R_3 + R_7), \frac{1}{2}(R_2 + R_7 + R_{12}), \frac{1}{2}(R_0 + R_5 + R_1 + R_6 + R_3 + R_9), \frac{1}{2}(R_0 + R_5 + R_4 + R_3 + R_6 + R_{10}), \frac{1}{2}(R_0 + R_9 + R_{11} + R_1 + R_6 + R_{10}), \frac{1}{2}(R_1 + R_5 + R_4 + R_8 + R_{10} + R_6), \frac{1}{2}(R_1 + R_6 + R_3 + R_4 + R_8 + R_{11}), \frac{1}{2}(R_3 + R_6 + R_{10} + R_8 + R_{11} + R_9)$.
- (131) $\text{nd}(Y_{131}) = 10$. Sequence: $(R_0 + R_{12}), (R_3 + R_{11}), (R_5 + R_8), \frac{1}{2}(R_0 + R_3 + R_8), \frac{1}{2}(R_1 + R_6 + R_2 + R_{12} + R_9 + R_{11}), \frac{1}{2}(R_1 + R_6 + R_5 + R_9 + R_{12} + R_{10}), \frac{1}{2}(R_1 + R_{10} + R_4 + R_5 + R_9 + R_{11}), \frac{1}{2}(R_2 + R_6 + R_5 + R_9 + R_{11} + R_7), \frac{1}{2}(R_2 + R_7 + R_4 + R_5 + R_9 + R_{12}), \frac{1}{2}(R_4 + R_7 + R_{11} + R_9 + R_{12} + R_{10})$.
- (132) $\text{nd}(Y_{132}) = 10$. Sequence: $(R_0 + R_{20}), (R_1 + R_{10}), (R_3 + R_{11}), (R_7 + R_{15}), \frac{1}{2}(R_0 + R_{12} + R_{13}), \frac{1}{2}(R_2 + R_{10} + R_{20}), \frac{1}{2}(R_0 + R_{14} + R_{15}), \frac{1}{2}(R_0 + R_{12} + R_{11} + R_{17}), \frac{1}{2}(R_1 + R_9 + R_{15} + R_{17}), \frac{1}{2}(R_0 + R_{12} + R_{11} + R_1 + R_9 + R_{15})$.
- (133) $\text{nd}(Y_{133}) = 10$. Sequence: $(R_0 + R_{12}), (R_2 + R_9), (R_3 + R_{11}), \frac{1}{2}(R_1 + R_6 + R_{10} + R_{12}), \frac{1}{2}(R_2 + R_4 + R_8 + R_7), \frac{1}{2}(R_1 + R_3 + R_4 + R_2 + R_6), \frac{1}{2}(R_1 + R_3 + R_4 + R_8 + R_{12}), \frac{1}{2}(R_1 + R_3 + R_7 + R_2 + R_{12}), \frac{1}{2}(R_1 + R_5 + R_4 + R_2 + R_{12}), \frac{1}{2}(R_2 + R_4 + R_3 + R_{10} + R_{12})$.
- (134) $\text{nd}(Y_{134}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{18}), \frac{1}{2}(R_{10} + R_{17}), \frac{1}{2}(R_{12} + R_{15}), (R_0 + R_{19}), (R_3 + R_{11}), \frac{1}{2}(R_0 + R_{10} + R_{13}), \frac{1}{2}(R_0 + R_{11} + R_{12}), \frac{1}{2}(R_8 + R_{10} + R_{12}), \frac{1}{2}(R_8 + R_{11} + R_{13}), \frac{1}{2}(R_3 + R_4 + R_9 + R_{19} + 2R_5)$.
- (135) $\text{nd}(Y_{135}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{18}), \frac{1}{2}(R_9 + R_{16}), \frac{1}{2}(R_{11} + R_{14}), (R_0 + R_{17}), (R_1 + R_{15}), \frac{1}{2}(R_0 + R_9 + R_{12}), \frac{1}{2}(R_0 + R_{14} + R_{15}), \frac{1}{2}(R_2 + R_9 + R_{14}), \frac{1}{2}(R_2 + R_{12} + R_{15}), \frac{1}{2}(R_1 + R_3 + R_4 + R_{17} + 2R_8)$.
- (136) $\text{nd}(Y_{136}) = 10$. Sequence: $(R_0 + R_{18}), (R_3 + R_{15}), \frac{1}{2}(R_0 + R_{12} + R_{13}), \frac{1}{2}(R_0 + R_{14} + R_{15}), \frac{1}{2}(R_1 + R_5 + R_{10}), \frac{1}{2}(R_2 + R_6 + R_{18}), \frac{1}{2}(R_3 + R_{11} + R_{19}), \frac{1}{2}(R_4 + R_7 + R_{18}), \frac{1}{2}(R_8 + R_9 + R_{18}), \frac{1}{2}(R_3 + R_4 + R_{18} + R_9)$.
- (137) $\text{nd}(Y_{137}) = 10$. Sequence: $(R_0 + R_{18}), (R_1 + R_{10}), \frac{1}{2}(R_0 + R_{12} + R_{13}), \frac{1}{2}(R_0 + R_{14} + R_{15}), \frac{1}{2}(R_0 + R_{16} + R_{17}), \frac{1}{2}(R_1 + R_5 + R_9), \frac{1}{2}(R_1 + R_{14} + R_{17}), \frac{1}{2}(R_1 + R_{15} + R_{16}), \frac{1}{2}(R_3 + R_{10} + R_{18}), \frac{1}{2}(R_0 + R_{14} + R_1 + R_{16})$.
- (138) $\text{nd}(Y_{138}) = 10$. Sequence: $\frac{1}{2}(R_7 + R_{11}), (R_0 + R_{10}), (R_1 + R_6), (R_2 + R_9), \frac{1}{2}(R_0 + R_8 + R_5 + R_{12}), \frac{1}{2}(R_4 + R_8 + R_5 + R_{13}), \frac{1}{2}(R_4 + R_8 + R_6 + R_{12}), \frac{1}{2}(R_4 + R_9 + R_5 + R_{12}), \frac{1}{2}(R_5 + R_8 + R_6 + R_9), \frac{1}{2}(R_1 + R_3 + R_2 + R_7 + R_{10})$.
- (139) $\text{nd}(Y_{139}) = 10$. Sequence: $(R_0 + R_2 + R_{10}), (R_1 + R_7 + R_{11}), (R_4 + R_6 + R_9), \frac{1}{2}(R_0 + R_2 + R_9 + R_6 + R_5), \frac{1}{2}(R_0 + R_5 + R_7 + R_1 + R_{10}), \frac{1}{2}(R_1 + R_7 + R_6 + R_4 + R_8), \frac{1}{2}(R_1 + R_{10} + R_2 + R_3 + R_{11}), \frac{1}{2}(R_2 + R_9 + R_4 + R_8 + R_{10}), \frac{1}{2}(R_3 + R_9 + R_6 + R_7 + R_{11}), \frac{1}{2}(R_1 + R_7 + R_6 + R_9 + R_2 + R_{10})$.
- (140) $\text{nd}(Y_{140}) = 10$. Sequence: $(R_0 + R_3 + R_{10}), (R_1 + R_6 + R_{11}), (R_5 + R_7 + R_9), \frac{1}{2}(R_0 + R_3 + R_2 + R_1 + R_{11}), \frac{1}{2}(R_0 + R_3 + R_9 + R_5 + R_4), \frac{1}{2}(R_0 + R_{10} + R_8 + R_6 + R_{11}), \frac{1}{2}(R_1 + R_2 + R_9 + R_7 + R_6), \frac{1}{2}(R_3 + R_9 + R_7 + R_8 + R_{10}), \frac{1}{2}(R_4 + R_5 + R_7 + R_6 + R_{11}), \frac{1}{2}(R_0 + R_3 + R_9 + R_7 + R_6 + R_{11})$.
- (141) $\text{nd}(Y_{141}) = 10$. Sequence: $\frac{1}{2}(R_6 + R_{17}), \frac{1}{2}(R_{11} + R_{14}), (R_1 + R_8), (R_2 + R_{13}), \frac{1}{2}(R_0 + R_7 + R_9 + R_{12}), \frac{1}{2}(R_0 + R_7 + R_{10} + R_{13}), \frac{1}{2}(R_0 + R_7 + R_{17} + R_8), \frac{1}{2}(R_0 + R_8 + R_9 + R_{13}), \frac{1}{2}(R_0 + R_8 + R_{10} + R_{12}), \frac{1}{2}(R_7 + R_9 + R_8 + R_{10})$.
- (143) $\text{nd}(Y_{143}) \geq 8$. Sequence: $(R_0 + R_5 + R_{10} + R_8), (R_1 + R_6 + R_4 + R_9), \frac{1}{2}(R_0 + R_1 + R_6 + R_4 + R_3 + R_2 + R_{10} + R_8), \frac{1}{2}(R_0 + R_1 + R_6 + R_4 + R_3 + R_7 + R_{10} + R_5), \frac{1}{2}(R_0 + R_1 + R_9 + R_4 + R_3 + R_2 + R_{10} + R_5), \frac{1}{2}(R_0 + R_1 + R_9 + R_4 + R_3 + R_7 + R_{10} + R_8), \frac{1}{2}(R_2 + R_7 + R_6 + R_9 + 2R_3 + 2R_4), \frac{1}{2}(R_5 + R_8 + R_6 + R_9 + 2R_0 + 2R_1)$.
- (144) $\text{nd}(Y_{144}) \geq 8$. Sequence: $(R_0 + R_4 + R_{10} + R_6), \frac{1}{2}(R_0 + R_4 + R_3 + R_9 + R_2 + R_8 + R_1 + R_6), \frac{1}{2}(R_0 + R_4 + R_3 + R_9 + R_7 + R_8 + R_{11} + R_6), \frac{1}{2}(R_1 + R_6 + R_{10} + R_4 + R_3 + R_9 + R_7 + R_8), \frac{1}{2}(R_2 + R_8 + R_{11} + R_6 + R_{10} + R_4 + R_3 + R_9), \frac{1}{2}(R_0 + R_1 + R_{10} + R_{11} + 2R_6), \frac{1}{2}(R_0 + R_3 + R_5 + R_{10} + 2R_4), \frac{1}{2}(R_0 + R_{10} + R_2 + R_7 + 2R_4 + 2R_3 + 2R_9)$.
- (145) $\text{nd}(Y_{145}) = 4$. Sequence: $(R_0 + R_2 + R_3 + R_4 + R_5 + R_6 + R_7 + R_9), \frac{1}{2}(R_0 + R_8 + R_1 + R_3 + 2R_9 + 2R_7 + 2R_6 +$

- $2R_5 + 2R_4$), $\frac{1}{2}(R_1 + R_5 + R_7 + R_8 + 2R_4 + 2R_3 + 2R_2 + 2R_0 + 2R_9)$, $\frac{1}{2}(2R_2 + 3R_0 + 4R_9 + 3R_7 + 2R_6 + R_5 + 2R_8 + R_3)$.
- (154) $\text{nd}(Y_{154}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2)$, $\frac{1}{2}(R_1 + R_{11})$, $\frac{1}{2}(R_1 + R_{25})$, $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_1 + R_{15})$, $\frac{1}{2}(R_1 + R_{28})$, $(R_1 + R_{18})$, $\frac{1}{2}(R_0 + R_{20} + R_{21})$, $\frac{1}{2}(R_3 + R_8 + R_{26})$, $\frac{1}{2}(R_3 + R_{16} + R_{19})$.
- (155) $\text{nd}(Y_{155}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_1)$, $\frac{1}{2}(R_0 + R_9)$, $\frac{1}{2}(R_0 + R_{11})$, $\frac{1}{2}(R_0 + R_8)$, $\frac{1}{2}(R_0 + R_{23})$, $\frac{1}{2}(R_0 + R_{26})$, $\frac{1}{2}(R_2 + R_6 + R_{24})$, $\frac{1}{2}(R_2 + R_{12} + R_{16})$, $\frac{1}{2}(R_6 + R_{10} + R_{16})$, $(R_2 + R_6 + R_{16})$.
- (157) $\text{nd}(Y_{157}) = 10$. Sequence: $\frac{1}{2}(R_4 + R_8)$, $\frac{1}{2}(R_4 + R_{15})$, $\frac{1}{2}(R_5 + R_9)$, $\frac{1}{2}(R_5 + R_{14})$, $\frac{1}{2}(R_4 + R_{23})$, $(R_4 + R_7)$, $\frac{1}{2}(R_0 + R_{17} + R_3 + R_{18})$, $\frac{1}{2}(R_0 + R_{20} + R_1 + R_{21})$, $\frac{1}{2}(R_1 + R_{13} + R_{18} + R_{20})$, $\frac{1}{2}(R_3 + R_{13} + R_{21} + R_{17})$.
- (158) $\text{nd}(Y_{158}) \geq 9$. Sequence: $\frac{1}{2}(R_0 + R_2)$, $\frac{1}{2}(R_2 + R_{16})$, $\frac{1}{2}(R_2 + R_2 \cdot H_2)$, $\frac{1}{2}(R_3 + R_4)$, $\frac{1}{2}(R_3 + R_{12})$, $\frac{1}{2}(R_2 + R_{14})$, $(R_2 + R_8)$, $\frac{1}{2}(R_1 + R_6 + R_8 + R_{15} + 2R_7)$, $\frac{1}{2}(R_5 + R_6 + R_8 + R_9 + 2R_{11})$.
- (159) $\text{nd}(Y_{159}) \geq 7$. Sequence: $\frac{1}{2}(R_0 + R_{13})$, $\frac{1}{2}(R_3 + R_4)$, $\frac{1}{2}(R_3 + R_{11})$, $\frac{1}{2}(R_3 + R_{12})$, $(R_3 + R_{14})$, $\frac{1}{2}(R_1 + R_6 + R_7 + R_2 + R_{14} + R_9 + R_5 + R_{15})$, $\frac{1}{2}(R_1 + R_8 + R_{14} + R_2 + R_7 + R_{10} + R_5 + R_{15})$.
- (161) $\text{nd}(Y_{161}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{39})$, $\frac{1}{2}(R_0 + R_{47})$, $\frac{1}{2}(R_0 + R_{53})$, $\frac{1}{2}(R_1 + R_{37})$, $\frac{1}{2}(R_1 + R_{49})$, $\frac{1}{2}(R_2 + R_{48})$, $\frac{1}{2}(R_2 + R_{52})$, $\frac{1}{2}(R_3 + R_{55})$, $\frac{1}{2}(R_4 + R_{46})$, $\frac{1}{2}(R_0 + R_2 + R_7)$.
- (162) $\text{nd}(Y_{162}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_8)$, $\frac{1}{2}(R_2 + R_{18})$, $\frac{1}{2}(R_5 + R_{13})$, $\frac{1}{2}(R_5 + R_{19})$, $\frac{1}{2}(R_6 + R_{27})$, $\frac{1}{2}(R_{11} + R_{27})$, $\frac{1}{2}(R_2 + R_{26})$, $\frac{1}{2}(R_4 + R_{12})$, $\frac{1}{2}(R_{12} + R_{20})$, $(R_2 + R_{17})$.
- (163) $\text{nd}(Y_{163}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_{11})$, $\frac{1}{2}(R_{16} + R_{19})$, $\frac{1}{2}(R_{17} + R_{18})$, $\frac{1}{2}(R_2 + R_3)$, $\frac{1}{2}(R_2 + R_4)$, $\frac{1}{2}(R_2 + R_{23})$, $\frac{1}{2}(R_2 + R_{15})$, $\frac{1}{2}(R_2 + R_{20})$, $\frac{1}{2}(R_2 + R_{25})$, $\frac{1}{2}(R_2 + R_{22})$.
- (164) $\text{nd}(Y_{164}) = 10$. Sequence: $(R_0 + R_8)$, $(R_1 + R_{13})$, $(R_7 + R_9)$, $(R_3 + R_{11})$, $\frac{1}{2}(R_1 + R_6 + R_2 + R_{12} + R_8 + R_{11})$, $\frac{1}{2}(R_1 + R_6 + R_5 + R_4 + R_7 + R_{11})$, $\frac{1}{2}(R_1 + R_{10} + R_4 + R_5 + R_8 + R_{11})$, $\frac{1}{2}(R_1 + R_{10} + R_{12} + R_2 + R_7 + R_{11})$, $\frac{1}{2}(R_2 + R_6 + R_5 + R_8 + R_{11} + R_7)$, $\frac{1}{2}(R_4 + R_7 + R_{11} + R_8 + R_{12} + R_{10})$.
- (165) $\text{nd}(Y_{165}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2)$, $\frac{1}{2}(R_1 + R_9)$, $\frac{1}{2}(R_1 + R_{24})$, $\frac{1}{2}(R_1 + R_{26})$, $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_1 + R_{30})$, $(R_1 + R_{22})$, $\frac{1}{2}(R_0 + R_{22} + R_{23})$, $\frac{1}{2}(R_3 + R_8 + R_{29})$, $\frac{1}{2}(R_3 + R_7 + R_{28})$.
- (166) $\text{nd}(Y_{166}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{24})$, $\frac{1}{2}(R_{14} + R_{21})$, $\frac{1}{2}(R_{16} + R_{19})$, $\frac{1}{2}(R_2 + R_3)$, $\frac{1}{2}(R_2 + R_{13})$, $\frac{1}{2}(R_2 + R_{22})$, $\frac{1}{2}(R_2 + R_{27})$, $\frac{1}{2}(R_2 + R_4)$, $\frac{1}{2}(R_2 + R_{26})$, $\frac{1}{2}(R_2 + R_{25})$.
- (167) $\text{nd}(Y_{167}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_2)$, $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_1 + R_{15})$, $\frac{1}{2}(R_1 + R_{24})$, $\frac{1}{2}(R_1 + R_{13})$, $\frac{1}{2}(R_1 + R_{29})$, $(R_1 + R_{14})$, $\frac{1}{2}(R_0 + R_7 + R_{19})$, $\frac{1}{2}(R_3 + R_{14} + R_{18})$, $\frac{1}{2}(R_5 + R_8 + R_{28})$.
- (168) $\text{nd}(Y_{168}) = 10$. Sequence: $\frac{1}{2}(R_2 + R_{10})$, $\frac{1}{2}(R_2 + R_{14})$, $\frac{1}{2}(R_2 + R_{12})$, $\frac{1}{2}(R_2 + R_{13})$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_1 + R_{16})$, $\frac{1}{2}(R_0 + R_4 + R_{11} + R_6 + R_5)$, $\frac{1}{2}(R_1 + R_3 + R_{11} + R_8 + R_7)$, $\frac{1}{2}(R_1 + R_{15} + R_9 + R_5 + R_{16})$, $\frac{1}{2}(R_3 + R_{11} + R_6 + R_9 + R_{15})$, $\frac{1}{2}(R_5 + R_6 + R_8 + R_7 + R_{16})$.
- (169) $\text{nd}(Y_{169}) = 10$. Sequence: $\frac{1}{2}(R_1 + R_{10})$, $\frac{1}{2}(R_1 + R_{12})$, $\frac{1}{2}(R_1 + R_{13})$, $\frac{1}{2}(R_1 + R_{14})$, $\frac{1}{2}(R_0 + R_4 + R_{11} + R_6 + R_5)$, $\frac{1}{2}(R_0 + R_5 + R_9 + R_2 + R_{16})$, $\frac{1}{2}(R_2 + R_8 + R_7 + R_6 + R_9)$, $\frac{1}{2}(R_2 + R_{15} + R_3 + R_4 + R_{16})$, $\frac{1}{2}(R_3 + R_{11} + R_6 + R_9 + R_{15})$, $\frac{1}{2}(R_4 + R_{11} + R_7 + R_8 + R_{16})$.
- (171) $\text{nd}(Y_{171}) \geq 8$. Sequence: $\frac{1}{2}(R_1 + R_3)$, $\frac{1}{2}(R_1 + R_{12})$, $\frac{1}{2}(R_1 + R_{13})$, $(R_1 + R_5)$, $\frac{1}{2}(R_0 + R_6 + R_5 + R_{11} + R_4 + R_{10} + R_2 + R_8)$, $\frac{1}{2}(R_2 + R_8 + R_{14} + R_6 + R_5 + R_{11} + R_9 + R_{10})$, $\frac{1}{2}(R_0 + R_2 + R_{14} + R_{15} + 2R_8)$, $\frac{1}{2}(R_0 + R_5 + R_7 + R_{14} + 2R_6)$.
- (172) $\text{nd}(Y_{172}) = 4$. Sequence: $\frac{1}{2}(R_1 + R_2)$, $(R_1 + R_{10})$, $\frac{1}{2}(R_0 + R_{10} + R_3 + R_5 + 2R_{11} + 2R_9 + 2R_8 + 2R_7 + 2R_6)$, $\frac{1}{2}(R_3 + R_7 + R_9 + R_{10} + 2R_6 + 2R_5 + 2R_4 + 2R_0 + 2R_{11})$.
- (173) $\text{nd}(Y_{173}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{37})$, $\frac{1}{2}(R_0 + R_{38})$, $\frac{1}{2}(R_0 + R_{52})$, $\frac{1}{2}(R_1 + R_{43})$, $\frac{1}{2}(R_1 + R_{49})$, $\frac{1}{2}(R_2 + R_{45})$, $\frac{1}{2}(R_3 + R_{50})$, $\frac{1}{2}(R_8 + R_{57})$, $\frac{1}{2}(R_{13} + R_{58})$, $\frac{1}{2}(R_0 + R_{10} + R_{13})$.
- (174) $\text{nd}(Y_{174}) = 10$. Sequence: $(R_0 + R_{19})$, $(R_2 + R_{14})$, $(R_3 + R_6)$, $(R_5 + R_{15})$, $\frac{1}{2}(R_0 + R_{13} + R_{14})$, $\frac{1}{2}(R_3 + R_{13} + R_{15})$, $\frac{1}{2}(R_1 + R_{16} + R_{17})$, $(R_1 + R_4 + R_{17})$, $\frac{1}{2}(R_0 + R_{15} + R_1 + R_{17})$, $\frac{1}{2}(R_1 + R_3 + R_{14} + R_{17})$.
- (175) $\text{nd}(Y_{175}) = 10$. Sequence: $\frac{1}{2}(R_3 + R_8)$, $\frac{1}{2}(R_3 + R_{17})$, $\frac{1}{2}(R_3 + R_{26})$, $\frac{1}{2}(R_5 + R_{12})$, $\frac{1}{2}(R_5 + R_{18})$, $\frac{1}{2}(R_6 + R_{11})$, $\frac{1}{2}(R_6 + R_{27})$, $\frac{1}{2}(R_{11} + R_{27})$, $\frac{1}{2}(R_{12} + R_{18})$, $(R_3 + R_{16})$.

(176) $\text{nd}(Y_{176}) \geq 7$. Sequence: $\frac{1}{2}(R_0 + R_{13})$, $\frac{1}{2}(R_3 + R_{12})$, $\frac{1}{2}(R_7 + R_8)$, $(R_0 + R_{15})$, $(R_3 + R_{10})$, $(R_7 + R_{11})$, $\frac{1}{2}(R_0 + R_3 + R_7)$.

(178) $\text{nd}(Y_{178}) = 10$. Sequence: $\frac{1}{2}(R_0 + R_{22})$, $\frac{1}{2}(R_{13} + R_{20})$, $\frac{1}{2}(R_{15} + R_{18})$, $(R_0 + R_{21})$, $(R_1 + R_{19})$, $(R_6 + R_{17})$, $\frac{1}{2}(R_0 + R_{13} + R_{17})$, $\frac{1}{2}(R_0 + R_{15} + R_{19})$, $\frac{1}{2}(R_2 + R_{13} + R_{15})$, $\frac{1}{2}(R_2 + R_{17} + R_{19})$.

(179) $\text{nd}(Y_{179}) = 10$. Sequence: $(R_0 + R_{13})$, $(R_1 + R_{15})$, $(R_2 + R_{14})$, $(R_3 + R_{12})$, $(R_4 + R_9)$, $(R_5 + R_8)$, $\frac{1}{2}(R_0 + R_3 + R_8)$, $\frac{1}{2}(R_0 + R_9 + R_{15})$, $\frac{1}{2}(R_3 + R_9 + R_{14})$, $\frac{1}{2}(R_8 + R_{14} + R_{15})$.

(180) $\text{nd}(Y_{180}) = 10$. Sequence: $(R_0 + R_{22})$, $(R_1 + R_{14})$, $(R_2 + R_{21})$, $(R_4 + R_{16})$, $(R_6 + R_{12})$, $(R_7 + R_{19})$, $\frac{1}{2}(R_0 + R_{18} + R_{19})$, $\frac{1}{2}(R_1 + R_{18} + R_{21})$, $\frac{1}{2}(R_2 + R_7 + R_{23})$, $\frac{1}{2}(R_2 + R_7 + R_4 + R_{14} + R_{22} + R_{12})$.

(181) $\text{nd}(Y_{181}) = 10$. Sequence: $(R_0 + R_{14})$, $(R_2 + R_7)$, $(R_3 + R_9)$, $(R_4 + R_{13})$, $(R_5 + R_{10})$, $\frac{1}{2}(R_0 + R_{10} + R_8 + R_1 + R_{12})$, $\frac{1}{2}(R_0 + R_{10} + R_8 + R_7 + R_{13})$, $\frac{1}{2}(R_0 + R_{10} + R_9 + R_1 + R_{13})$, $\frac{1}{2}(R_0 + R_{11} + R_8 + R_1 + R_{13})$, $\frac{1}{2}(R_1 + R_8 + R_{10} + R_6 + R_{13})$.

(182) $\text{nd}(Y_{182}) = 10$. Sequence: $(R_0 + R_4 + R_{13})$, $(R_1 + R_3 + R_{12})$, $(R_5 + R_6 + R_{10})$, $(R_7 + R_8 + R_9)$, $\frac{1}{2}(R_0 + R_4 + R_3 + R_1 + R_{14})$, $\frac{1}{2}(R_0 + R_4 + R_{11} + R_6 + R_5)$, $\frac{1}{2}(R_0 + R_5 + R_{10} + R_2 + R_{13})$, $\frac{1}{2}(R_0 + R_{13} + R_9 + R_7 + R_{14})$, $\frac{1}{2}(R_1 + R_{12} + R_{10} + R_5 + R_{14})$, $\frac{1}{2}(R_2 + R_{12} + R_3 + R_4 + R_{13})$.

(183) $\text{nd}(Y_{183}) = 10$. Sequence: $(R_0 + R_{15})$, $(R_2 + R_{10})$, $(R_3 + R_{14})$, $\frac{1}{2}(R_0 + R_{11} + R_5 + R_{12})$, $\frac{1}{2}(R_1 + R_{13} + R_8 + R_{14})$, $\frac{1}{2}(R_0 + R_{11} + R_9 + R_1 + R_{13})$, $\frac{1}{2}(R_0 + R_{11} + R_9 + R_8 + R_{14})$, $\frac{1}{2}(R_0 + R_{11} + R_{10} + R_1 + R_{14})$, $\frac{1}{2}(R_0 + R_{12} + R_9 + R_1 + R_{14})$, $\frac{1}{2}(R_1 + R_9 + R_{11} + R_5 + R_{14})$.

(184) $\text{nd}(Y_{184}) = 7$. Sequence: $(R_0 + R_3 + R_4 + R_8)$, $(R_1 + R_6 + R_{10} + R_9)$, $(R_2 + R_7 + R_5 + R_{11})$, $\frac{1}{2}(R_0 + R_3 + R_4 + R_5 + R_7 + R_2 + R_1 + R_9 + R_{10})$, $\frac{1}{2}(R_0 + R_3 + R_4 + R_5 + R_{11} + R_2 + R_1 + R_6 + R_{10})$, $\frac{1}{2}(R_0 + R_8 + R_4 + R_5 + R_7 + R_2 + R_1 + R_6 + R_{10})$, $\frac{1}{2}(R_0 + R_8 + R_4 + R_5 + R_{11} + R_2 + R_1 + R_9 + R_{10})$.