Tannenzaepfle bipartite graphs Tz(n), n=1, 2, 3, ...

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n = 1   n =2   n=3   n=4   n=5   ...
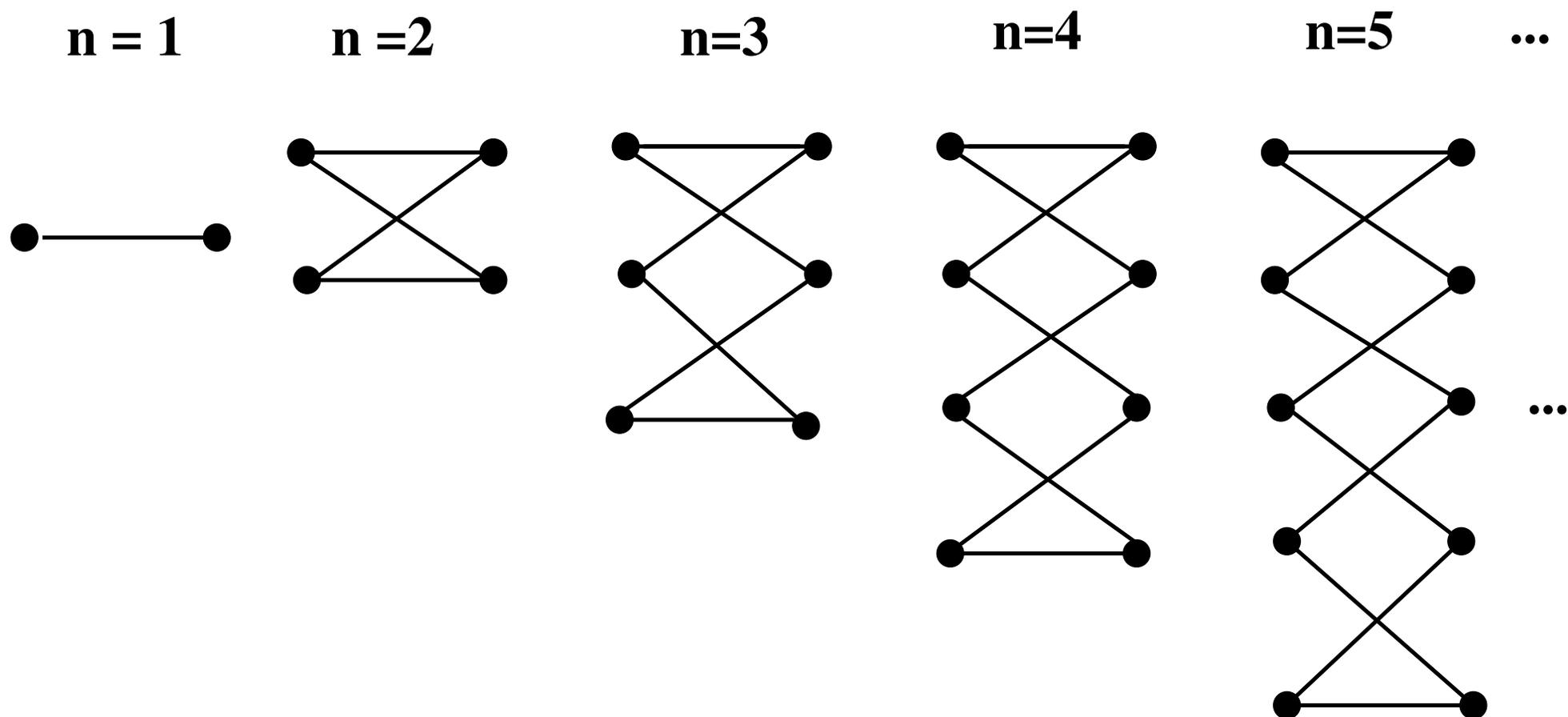
Vertex−vertex−matrices (also called) Tz(n) for n=1, 2, 3, 4:

$$(1) \quad \begin{pmatrix} 1 & 1 \\ 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 1 \end{pmatrix} \quad \begin{pmatrix} 1 & 1 & 0 & 0 \\ 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 1 \end{pmatrix}$$

The determinants Det(Tz(n)) =: a(n) give a sequence

found as A176742 in the On−Line Encyclopedia of Integer

Sequences   http://www.research.att.com/~njas/sequences

This sequence starts like

[1, 0, −2, 0, 2, 0, −2, 0, 2, 0, −2, 0, 2, 0, −2, 0, 2, −2, 0, 2, ...] .

It has the (ordinary) generating function G(x)= $\dfrac{1 - x^2}{1 + x^2}$.