

Continuity of the Shannon capacity on graphs

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The Shannon capacity

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For a graph G let $\alpha(G)$ the independence number of G . Then

$$\Theta(G) := \lim_{n \rightarrow \infty} \alpha(G^{\boxtimes n})^{1/n}$$

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It is known that $\Theta(C_5) = \sqrt{5}$ [Lovász; 1973] but $\Theta(C_7)$ is not known!

Fraction graphs $E_{p/q}$

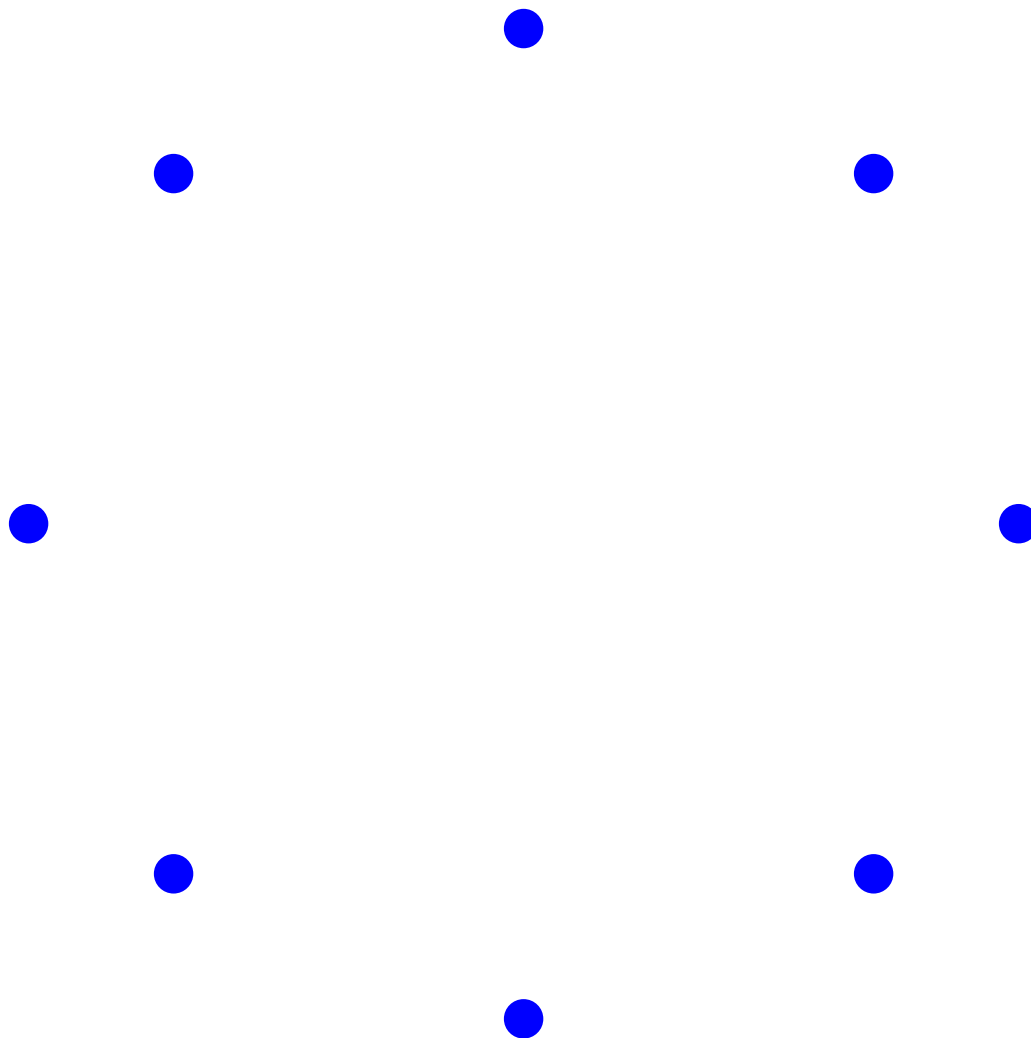
$$E_{8/3}$$

$$p = 8$$

$$q = 3$$

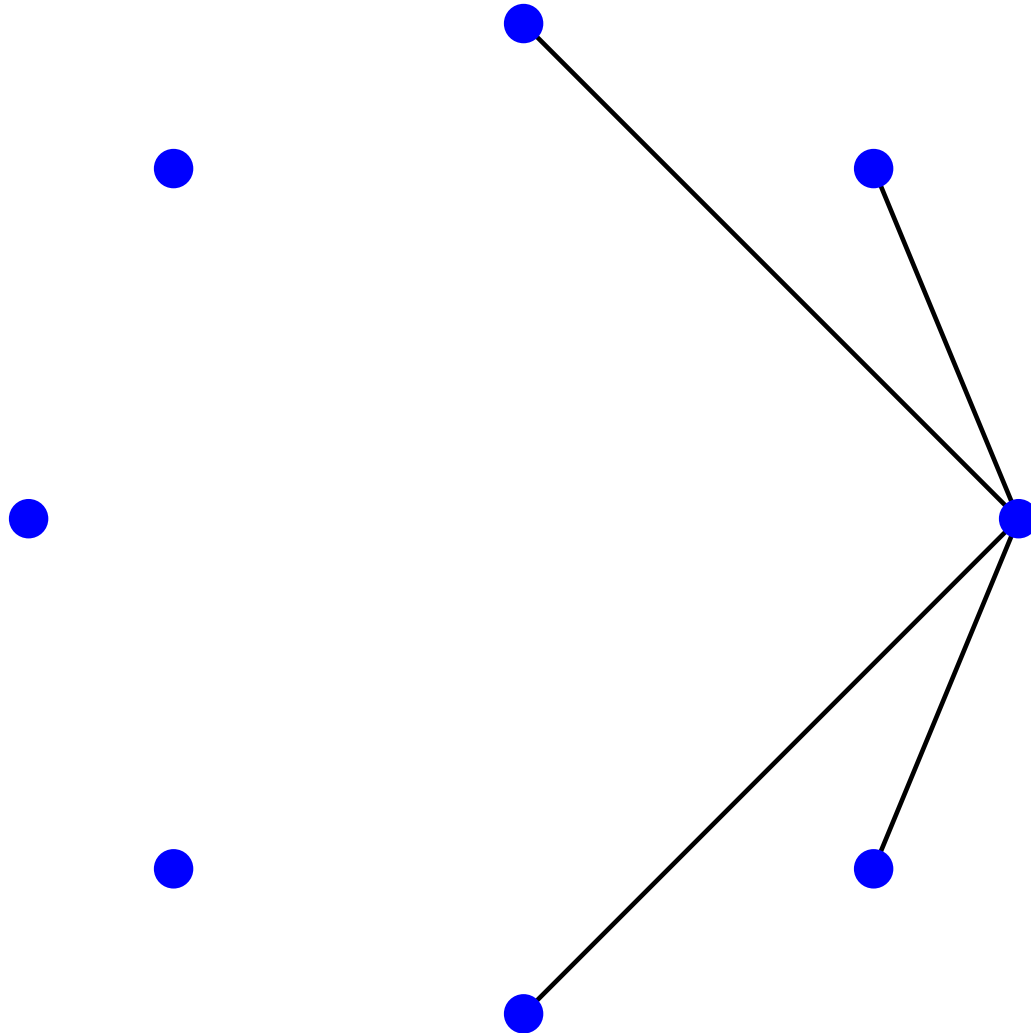
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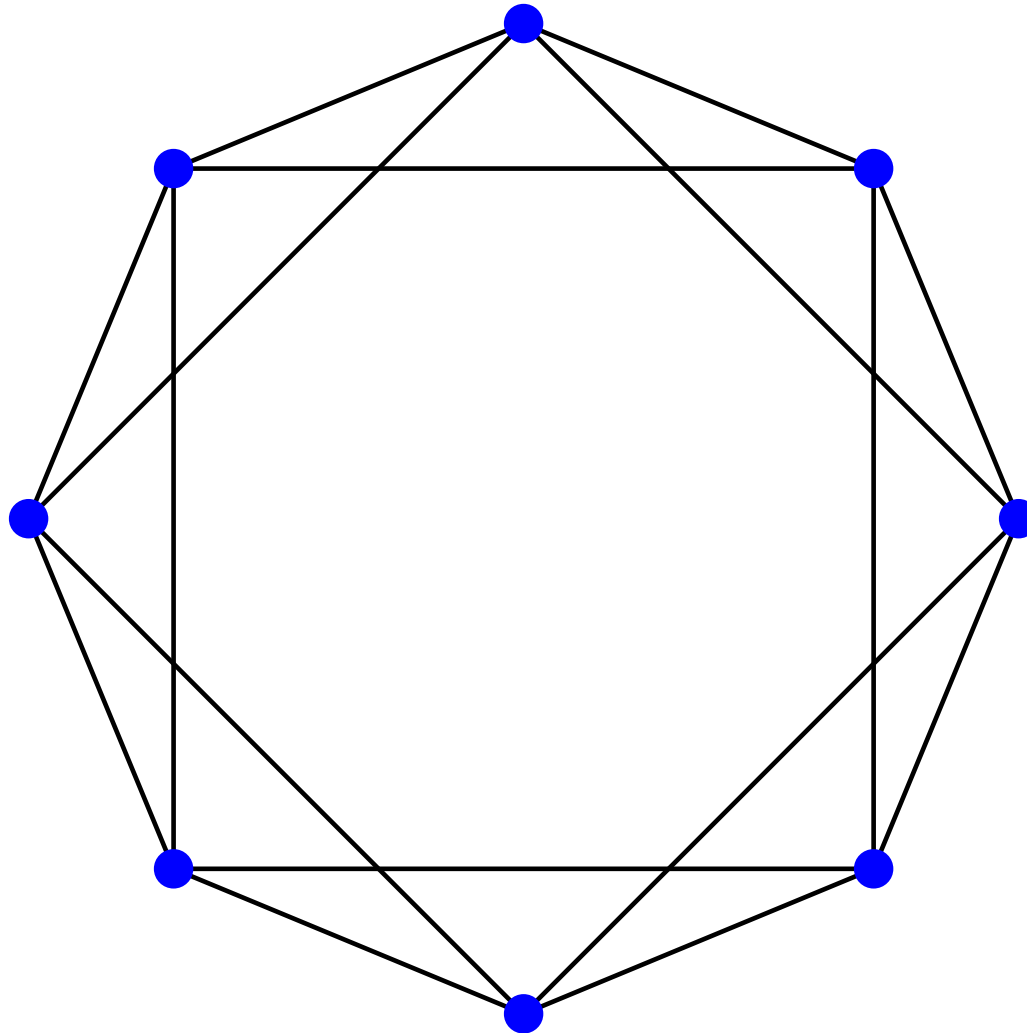
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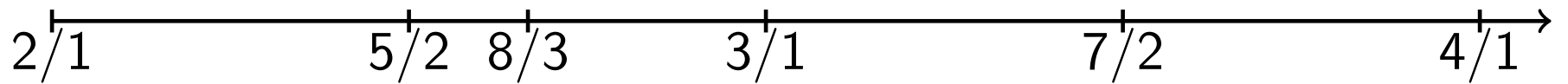
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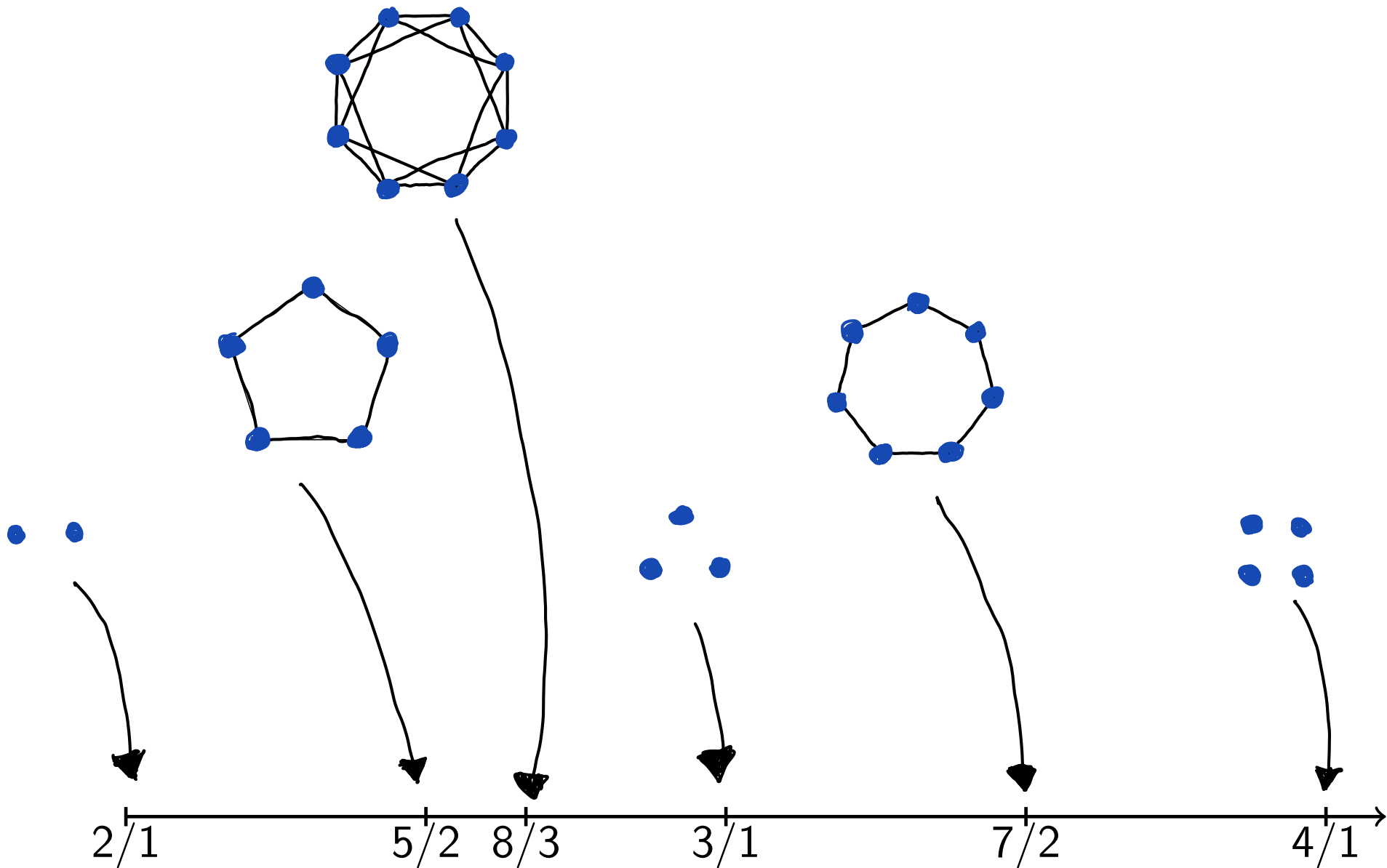


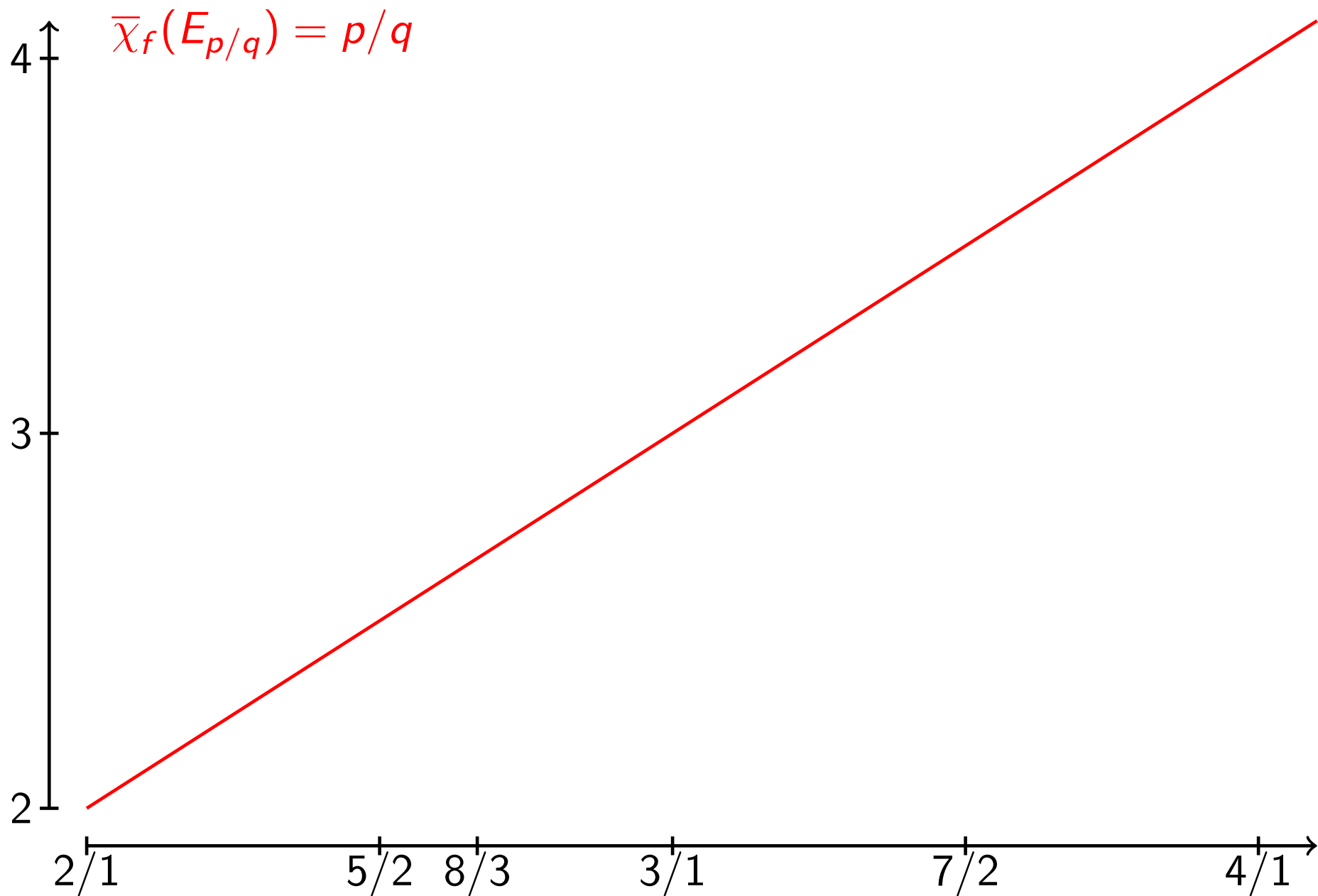
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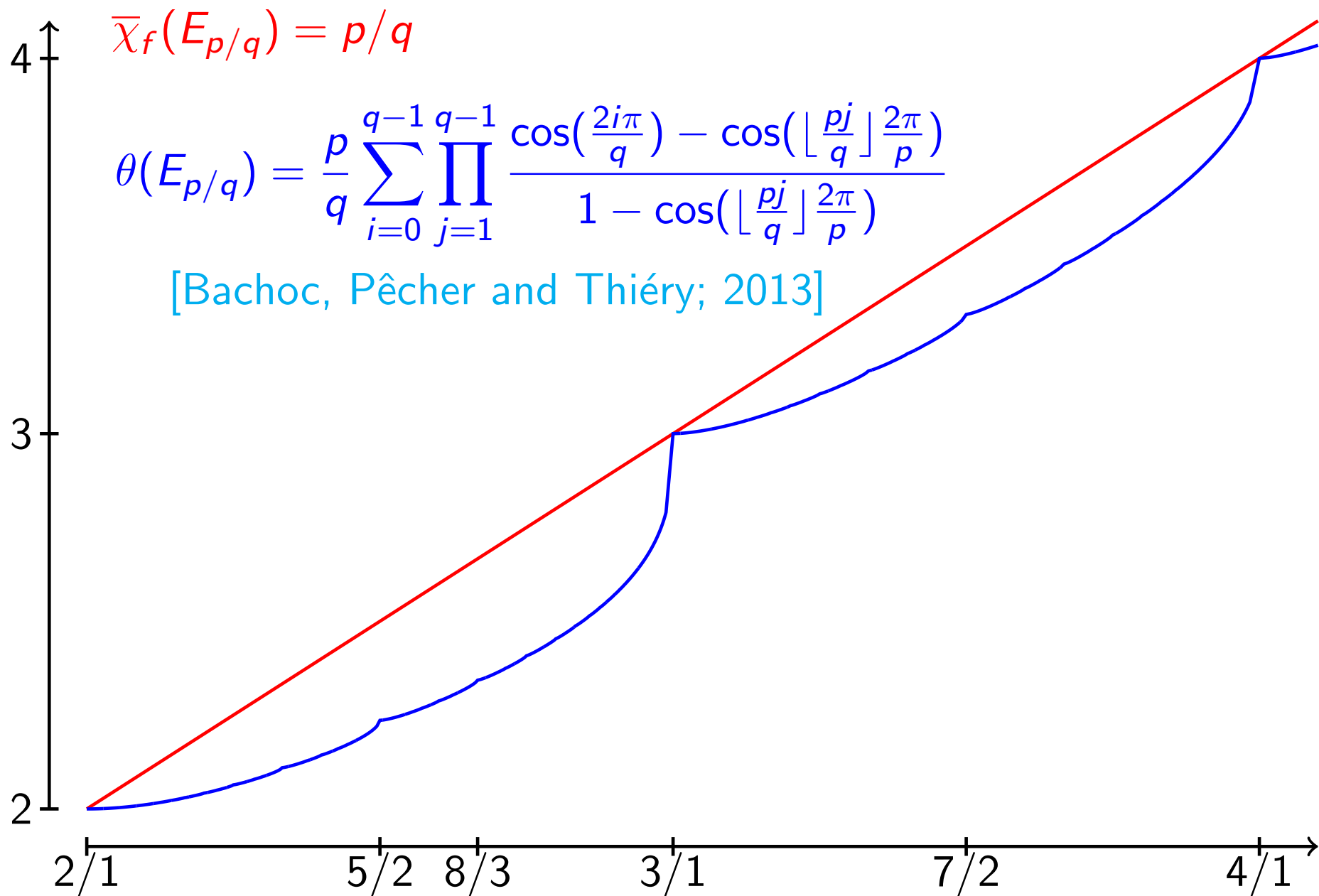
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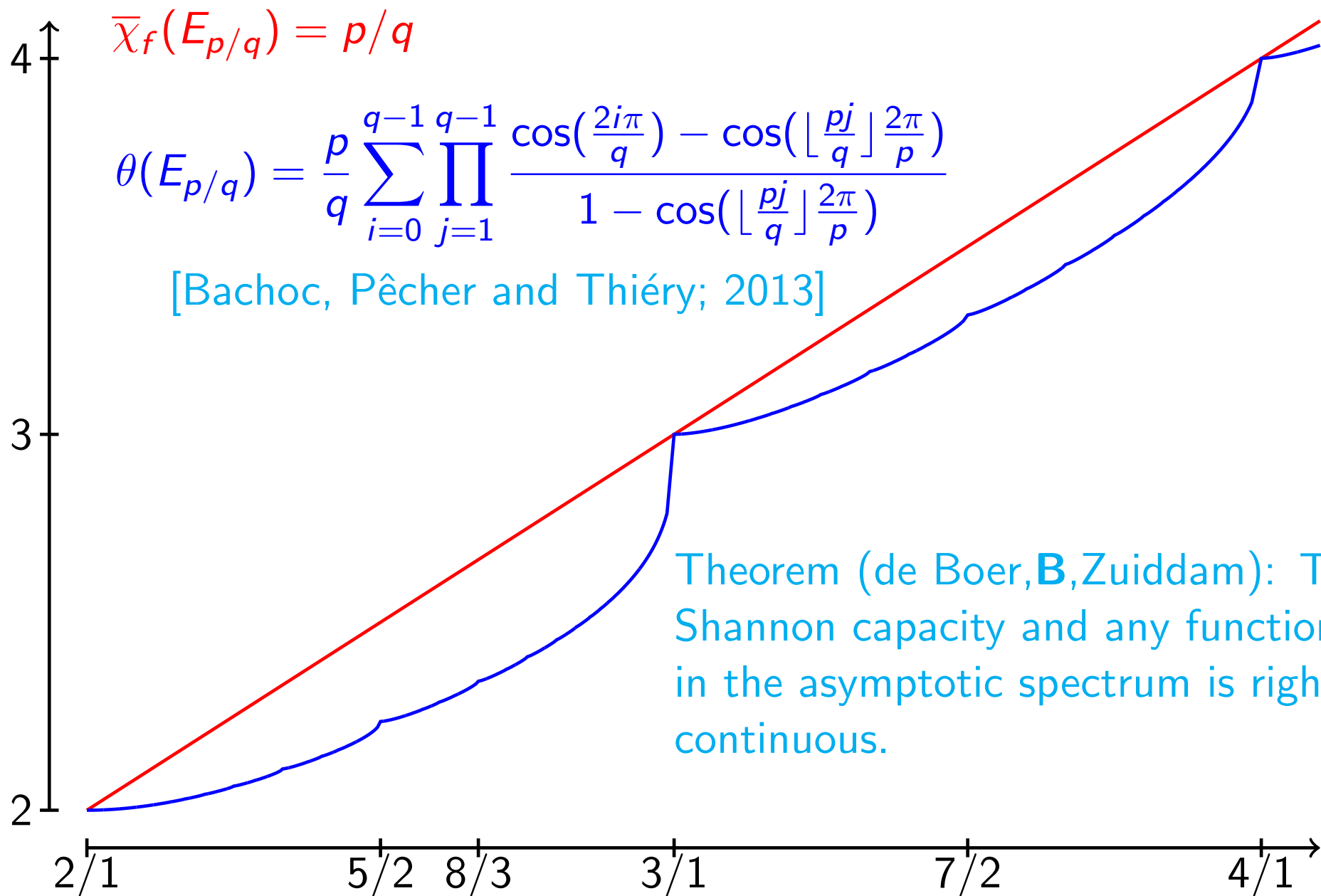












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