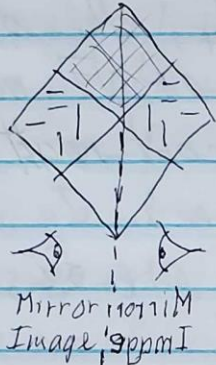


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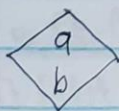
Quantum matrices should allow any  $\sqrt{1}$  on the main diagonal  
[Previous page left blank to make charts on its other side easier and cleaner to photocopy.]

Terry Bollinger 2016-02-14. 15:57 Sun



There is an extraordinarily simple principle behind concepts such as Hermitian matrices, which is that any mirror-image matrix setup using vertical-main-diagonal form with all numeric constants in  $S_n$  permutation matrix form is a square root of 1. That is for all permutation matrices, not just "diaps" ([dia]mond [plate] [diap = the subset of  $S_{2^n}$   $n=0,1,2,\dots$  matrices with the recursive constraint that at each scale, two opposite quadrants must be completely empty, either the main diagonal quadrants [vertical in this presentation] or the minor diagonal quadrants [horizontal in this format])

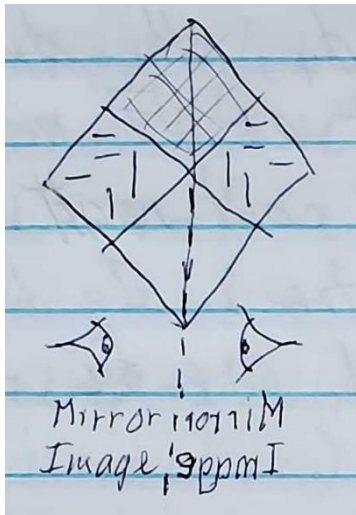
Any diap that is mirror symmetric automatically is also mirror symmetric in the multiplication "trellis," and so is a square root of one



Issue: The "real numbers only" Hermitian constraint is too strong, forbidding eg. "a" and "b."

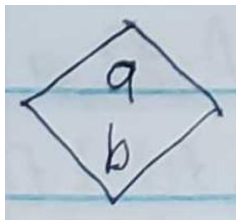
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[2016-02-14.14:38 Sun>  
 [Quantum matrices should allow an  $\sqrt{1}$  on the main diagonal]  
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 other side easier and cleaner to photocopy.]



There is an extraordinarily simple principle behind concepts such as Hermitian matrices, which is that any mirror-image matrix setup using vertical-main-diagonal form with all numeric constants in  $S_n$  permutation matrix form is a square root of 1. That is, for all permutation matrices, not just "diaps" ([dia]mond [p]late) (diap = the subset of  $S_{2^n}$   $n=0,1,2,\dots$  matrices with the recursive constraint that at each scale, two opposite quadrants must be completely empty, either the main diagonal quadrants [vertical in this presentation] or the minor diagonal quadrants [horizontal in this format]

Any diap that is mirror symmetric automatically is also mirror symmetric in the multiplication "trellis," and so is a square root of one



Issue: The "real numbers only" Hermitian constraint is too strong, forbidding e.g. "a" and "b." [15:35]

Terry Bollinger 2016-02-14.15:37 Sun