

ZMATH 2015f.00445

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The ‘flipping coins’ problem – in relation to thinking mathematically.

Math. Teach. (Derby) 239, 16-20 (2014).

Summary: The author describes the ‘highs and lows’ of mathematical investigation. A teacher of chemistry and a teacher of mathematics tackle the same problem. The scientist is stereotypically a pragmatist in approach and solution, whereas the mathematician is thorough in his approach and questioning of any solution. The author, a student, begins by observing the investigation, then finds that he becomes so involved that he just ‘can’t leave it alone’. From deriving a suitable notation to trying out different forms of representation the search for a solution became all absorbing. This is an honest account, documenting both success and failure, blind alleys and alleys that just might be going somewhere. Then, as is often the case, the solution appeared to be simple.

Classification: D50 M10

Keywords: problem solving; mathematical thinking; mathematical ability; problem solving strategies; visualisation; graphical representations; modes of representation; pattern recognition; notation; algebraic expressions; algorithms