to Gardner's three-square problem [5] which has been proven synthetically in 54 ways [6]. Proof of the second value of arccot 1 is asked for in [7].

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$$\lambda = k\frac{n^2}{n^2 - 2^2} \qquad (n = 3, 4, 5, 6)$$

or in the better known form:

$$\nu = R\left(\frac{1}{2^2} - \frac{1}{n^2}\right) ,$$

where ν is the frequency and R the "Rydberg's constant."

It may be of interest to note that all denominators of the simple fractions used by Balmer for deriving his formula, i.e., 3, 5, 8 and 21, are Fibonacci numbers.