

The Flower Puzzle Generalized

by Manjil Saikia - Thursday, August 23, 2012

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This article is a crazy generalization of the [Flower puzzle](#) by Ankush Goswami published in [Gonit Sora](#) on 12th July 2012. We now suppose that instead of three there are m temples A_1, A_2, \dots, A_m and instead of doubling, the flowers increase n times in number instantly. Let the priest come to the temple with x flowers and keep y flowers in each temple. So after keeping y flowers in temple A_1 the priest has $x-y$ flowers which instantly become n^2x-ny ; after keeping in temple A_2 number of flowers become n^3x-n^2y-ny and so after keeping in the m th temple number of flowers become $n^{m+1}x-n^m y-n^{m-1}y-\dots -ny$ which should actually be equal to zero !! Thus

$$n^{m+1}x-n^m y-n^{m-1}y-\dots -ny = 0$$

$$\Rightarrow \frac{x}{y} = \frac{1+n+n^2+n^3+\dots +n^{m-1}}{n^m}$$

$$\Rightarrow \frac{x}{y} = \frac{n^m-1}{n^m(n-1)}$$

The above relation gives all possible values of the number of flowers brought by the priest (x) and the number of flowers given by him in each temple (y).

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