

Problem of the Week

10/05/2009 to 10/16/2009

Given a real number x , let $\lfloor x \rfloor$ denote the largest integer n such that $n \leq x$. For example $\lfloor \pi \rfloor = 3$.

Determine the number of real solutions to the equation

$$\left\lfloor \frac{a}{2} \right\rfloor + \left\lfloor \frac{a}{3} \right\rfloor + \left\lfloor \frac{a}{5} \right\rfloor = a.$$

Solutions for this problem can be submitted to Dr. Brian Miceli at bmiceli@trinity.edu, or you can drop them off at his office, MMS 115F. People with correct solutions will be acknowledged once the solution to this problem has been posted. If you like these problems, you may be interested in the Putnam Exam. More information on the Putnam Exam can also be found at www.trinity.edu/bmiceli.