

The Department of Mathematics
Presents
The Problem of the Month
November 2018

*You could win a Starbucks gift card by
solving the problem below!*

Find all positive integers a and b such that

$$a! + 6 = b^2.$$

Justify your answer.

The Fine Print: Participation in the Problem of the Month is restricted to current Southeast undergraduates only. Any undergraduate may submit a solution for a chance to win! To submit a solution, write your complete solution on a piece of paper and submit it to Dr. Daly in the Department of Mathematics, Johnson Hall 201. Please include your name, Southeast email address and SO number. Solutions without that information will not be considered. Three solutions will be chosen from the correct solutions received and those chosen will win a Starbucks gift card! Solutions are due at noon on November 30, 2018. Happy solving!

One last note: Faculty, we know you're intrigued by problems of this sort, but please don't spoil the fun for the undergrads by helping solve this problem. The fun of problem solving is solving problems for yourself!