

## Problem Solving Competition – Problem #10

- Your submission should contain a FULL solution. Not just the answer, but your entire argument.
- Submit solutions to Nancy in MCT 250, or Dr. Taylor in MCT 281.
- Questions?? Ask Dr. Taylor in MCT 281 or by email at [pttaylor@ship.edu](mailto:pttaylor@ship.edu).
- Problems and occasional updates on solutions and winners will be posted at [webspace.ship.edu/pttaylor/PSC/index.html](http://webspace.ship.edu/pttaylor/PSC/index.html)

Consider a differentiable function  $f$  such that  $f(f(x)) = x$  for all positive numbers. Suppose also that  $f(2) = 2$ . Find all possible values of  $f'(2)$ , and find an example of such a function for each possible value of  $f'(2)$ .

Solutions for this problem are due **Wed, May 3** at 4pm.

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