

Math 1190 Quiz #6

Problem 1: Several pairs of positive integers (m, n) satisfy the equation $19m + 98 + 8n = 2006$. Of these, $(100, 1)$ is the pair with the smallest value for n . Find the pair with the smallest value for m .

Problem 2: With proof, find the smallest possible value of $|12^m - 5^n|$, where m and n are positive integers.

Problem 3: Prove that $\frac{x^5}{5} + \frac{x^3}{3} + \frac{7x}{15}$ is an integer for every integral value of x .

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