

# MATH3336 Extra Credit (+5)

Dr Douglas

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The following is an extra credit assignment. Show all your work for full credit. Please make sure to attempt the assignment. I appreciate originality. Copied work from other students will result in 0. The deadline is **May 1st, 2023**. Please email me your work at **sarahsyed56@gmail.com**

## 1 Use the Principle of Mathematical Induction to prove for all natural numbers

$$\sum_{i=1}^n (3i - 2) = \frac{n}{2}(3n - 1)$$