

Name: \_\_\_\_\_

Entry number: \_\_\_\_\_

There are 1 questions for a total of 6 points.

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1. (6 points) Prove or disprove: Given any 17 natural numbers, it is possible to choose 5 whose sum is divisible by 5.

2. (4 points) Prove or disprove: For any positive integer  $n$ ,  $n^5 - 5n^3 + 4n$  is always divisible by 5.