

Name: _____

Entry number: _____

There are 2 questions for a total of 10 points.

1. (4 points) Prove or disprove: For any positive integer n , $n^5 - 5n^3 + 4n$ is always divisible by 5.

2. (6 points) Prove or disprove: Given any 17 natural numbers, it is possible to choose 5 whose sum is divisible by 5.