

Name:

Notice:

1. Please box your final answer.
2. Please stop writing when time is up.

Problem 1 (5 points):

Do Division Algorithm for $f(x) = 3x^5 + 4x^2 + 1$ and $g(x) = x^2 + 1$ in $\mathbb{Z}_5[x]$.

$$f(x) = g(x)(3x^3 + 2x + 4) + 3x + 2$$