# Spring 2019, Math 596: Preliminary Problem Set 11 

## Due: Thursday, April 18th, 2019

Rational Generating Functions

Preliminary problems. These problems should be completed before discussion on Thursday.
(P1) Consider the formal power series

$$
A(z)=\sum_{n=0}^{\infty} a_{n} z^{n}=\frac{z^{5}+z^{4}+z^{3}+z^{2}+z+1}{1-z^{4}}
$$

Write down a (piecewise) formula for $a_{n}$ in terms of $n$.

