

7) Describe the set of points  $z$  in the complex plane that satisfies this equation.

$$|z-1| + |z+1| = 7.$$

3c) Write the polynomial in factored form:

$$1+z^2+z^3+z^4+z^5+z^6$$

13d) Find the partial fraction decompositions of each this rational function HINT: first apply the division algorithm to obtain a rational function of suitable form.

$$\frac{(5z^4 + 3z^2 + 1)}{(2z^2 + 3z + 1)}$$