

Remote Assessment 7.1

For each polynomial:

- a) Give the degree of the polynomial
- b) ***According to theory***, what is the largest number of relative local extrema for f.
- c) State the zeros and their multiplicities
- d) Provide a ***rough*** sketch

1. $f(x) = 3(x - 7)(x + 3)^2$

1a. _____

b. _____

c. _____

d.

2. $f(x) = 4(x + 3)^4(x - 2)^3$

2a. _____

b. _____

c. _____

d.

For the function, find

a) end behavior (should not need calculator)

b) real zeros (no calculator. Use Rational Root theorem where necessary)

c) extrema (Calculator Active)

3. $f(x) = x^4 + x^3 - 11x^2 - 9x + 18$

3a. _____

b. _____

c. _____

Form a polynomial (expanded form) with the given zeros

4. Zeros: -1, 1, 3

4. _____

5. Zeros: -3, 0, 2 multiplicity 2

5. _____