MHF4U EXAM 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Instructor: | K.LIU |  | Name: |  |
| Results: | /50 |  | Class: |  |
|  |  |  | Date: |  |

Write the answer AND the steps. Full marks will only be given to answers with steps written.  
Only scientific calculators are allowed.

1. Rewrite the expressions in Factored Form(8 marks):
2. State the degree, leading coefficient, Even/Odd, End Behaviors, and number of turning points of the polynomial for the function (9 marks)
3. For the functions in the previous questions, Sketch a possible graph of each functions. Clearly indicate the x-intercepts and y-intercepts. (9 marks)
4. Find the average rate of change of the function over the given interval(8 marks).

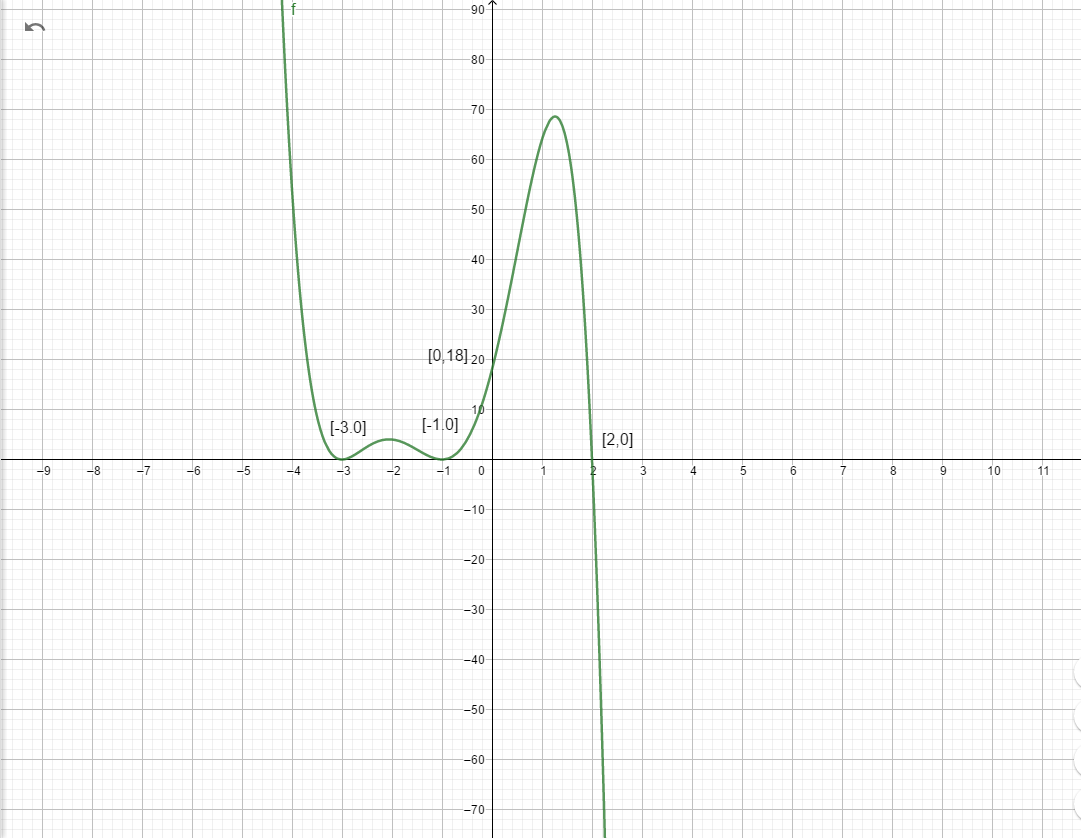
d.

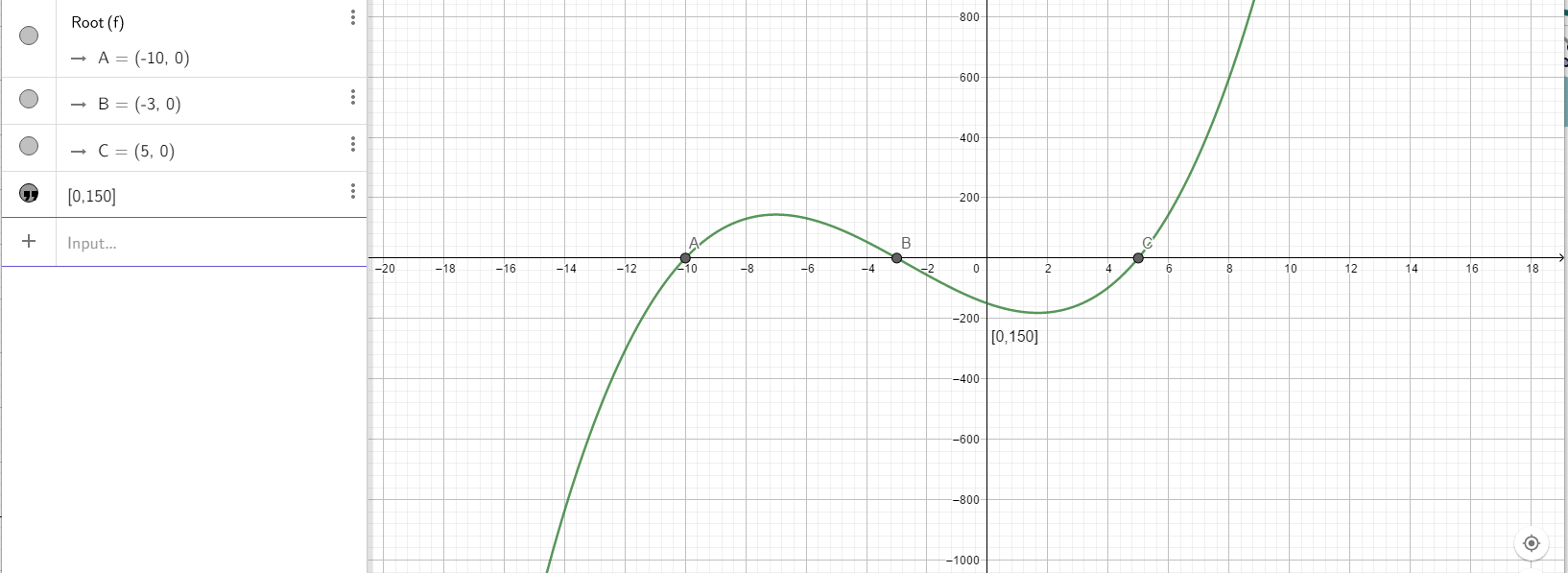
1. The displacement, s, in metres, of a particle moving back and forth in a straight line can be modeled by the function . is measured in seconds.

Find the average rate of change of the distance with respect to time from 1s to 4s (3 marks).

1. The population, P, of a small town is modelled by the function  
    , where represents the beginning of this year.
   1. Write an expression for the average rate of change of population from to ( 2 marks)
   2. Use the expression in part a) to determine the average rate of change of the population when ( 2 marks)

6. Write a possible function for the following graphs using factor form ( 9 marks):



1. 
2. 