a)

|  |  |
| --- | --- |
| Objective: | Find that minimizes fitness value. |
| Terminal set | X1 |
| Function set: | {plus, minus, times, mydivide} |
| Fitness cases: | 21 |
| Raw fitness: | , where |
| Standardized fitness: | We can use the same as Raw fitness, as it satisfies the standardization requirements already. |
| Hits: | [100 1] |
| Wrapper: |  |
| Parameters: |  |
| Success predicate: | Given by Hits, we specify the success predicate as 100% of the fitness cases falls within 1% of the desired value. This automatically indicates we have found the exact solution to the problem. (the 1% is to get rid of precision) |

b)

For generation 0, we have the fittest member as:



It has fitness value of 13.3100, depth of 4, and 13 nodes.

c)

d) Optimal after 151 generations:



- Creating generation 3 -

(increasing maximum depth to 7)

#Individuals: 1000

UsedResources: 19752

Best so far: 2785

Fitness: 2.000000

Depth: 7

Nodes: 33

e) This is an approximate of the problem.

f)