

# **3801ICT - Numerical Algorithms**

Milestone One

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Question 1

T,s	200	202	204	206	208	210
, rad	0.75	0.72	0.70	0.68	0.67	0.66
R, m	5120	5370	5560	5800	6030	6240

## Question 2

When an aircraft is being tracked by radar then the position of the aircraft is determined by distance (calculated from the return time of pulse) and the sweep angle of the radar. To give a meaningful radar display this information needs to be converted to cartesian coordinates and velocity and acceleration (both vectors) need to be calculated. Write a program to perform this operation (use centered finite differences(second-ordercorrect)) and test your program with the data shown in the table below.

### Question 3