Give MATLAB code to do the following in succession:

(a) Create a vector $x$ with the integers 1 up to 100.

(b) Using vector $x$, create a vector $y$ with the odd integers from 43 up to 241.

(c) Without using vector $x$, create a vector $y$ with the even integers from 100 to $-98$ in decreasing order.

(d) Create a 100-entry vector that has as its $k^{th}$ entry the sum of the first $k$ squares. (Hint: MATLAB has a `cumsum` vector operation.)