MATLAB: Hookian Springs

For a *Hookian spring*, an applied force F (N) results in a displacement x (m) according to the equation:

$$F = kx$$

where k is the spring constant (N/m). The spring's potential energy U (J) is given by:

$$U = \frac{1}{2}kx^2$$

A load was applied to six different springs and the resulting displacements were measured:

Spring	1	2	3	4	5	6
F (N)	15	17	19	13	20	18
x (m)	0.34	0.45	0.35	0.28	0.26	0.31

a) Store the tabulated data in two vectors: `F` and `x`
b) Compute each spring's `k` and `U`.
c) Use the `min()` and `max()` functions to compute and determine the springs with the minimum and maximum `U`.
d) Use the `fprintf()` function to print statements to the Command Window *similar* to the following:

```
"Spring W has the minimum potential energy: U = X.X J"

"Spring Y has the maximum potential energy: U = Z.Z J"
```