Value of Young's Modulus = 43/.01 = 4300

Strain Endpoints = 0.01, 0.06, 0.18, 0.27

Stress Endpoints = 43, 43.5, 60, 51

Variables:

pointA = [.01, 43]

pointC = [.06, 43.5]

pointD = [.18, 60]

pointE = [.27, 51]

strainInput = user's strain value

stress = output

slope

yIntercept

STEPS:

Create a slope equation for each section

Create a function that returns stress given strain for each section using the slope formula

Get user input

If input is outside of the range, return an error

Check if input is between 0-A, A-C, C-D, or D-E

Depending on where the input is, call the method that correlates with that domain

Print the stress approximation to the screen

Test Cases:

Input	Output	Case type
0	0	Edge
.005	21.5	Typical
.01	43.0	Edge
.04	43.3	Typical
.06	43.5	Edge
.1	49	Typical
.18	60.0	Edge
.24	54.	Typical
.27	51.0	Edge
.3	Error	Corner