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```
function [scLength,bodyMass]=PS06_sitstand_subUDF_ful94WZ(secMass,secLength,centerOfMass)
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% ENGR 132
% Program Description
% input mass ,length of 3 parts,calculate the total mass and total
%
% Function Call
% [scLength,bodyMass]=PS06_sitstand_subUDF_ful94WZ(secMass,secLength,centerOfMass)
%
% Input Arguments
% secMass - 1*3 vector represent mass of 3 sections
% secLength - 1*3 vector represent length of 3 sections
% centerOfMass - 1*3 vector represent center of mass position of each
% section
%
% Output Arguments
% seLength - 1*3 vector,  scaled lengths of each section
% bodyMass - double, total mass of body
%
% Assignment Information
% Assignment:      PS 06, Problem 2
% Author:         Yuefan Fu,ful94@purdue.edu
% Team ID:        001-05
% Contributor:    Name, login@purdue [repeat for each]
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

INITIALIZATION

CALCULATIONS

```
ds=(secMass(2).*secLength(1)+secMass(3).*secLength(1)+secMass(1).*centerOfMass(1))./sum(secMass);
dt=(secMass(3).*secLength(2)+secMass(2).*centerOfMass(2))./sum(secMass);
dh=(secMass(3).*centerOfMass(3))./sum(secMass);
bodyMass=sum(secMass);
```

```
scLength=[ds,dt,dh];
```

FORMATTED TEXT & FIGURE DISPLAYS

COMMAND WINDOW OUTPUT

```
%x =  
  
%    0.4040    0.3555    0.2286  
  
%y =  
  
%    34.6200
```

ACADEMIC INTEGRITY STATEMENT

I/We have not used source code obtained from any other unauthorized source, either modified or unmodified. Neither have I/we provided access to my/our code to another. The project I/we am/are submitting is my/our own original work.

```
end
```

```
scLength =  
  
    0.4040    0.3555    0.2286  
  
bodyMass =  
  
    34.6200
```