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```
function lect3_5
```

```
close all; clc; clear x y z m
format compact
% FL, FR, BL, BR, Avionics
x = [0.13;0.13;-0.13;-0.13;0.0];
y = [-0.22;0.22;-0.22;0.22;0];
z = [0;0;0;0;0];
m = [0.2;0.2;0.2;0.2;0.8];
```

Problem 5, Part A

```
Jx = sum((y.^2+z.^2).*m);
Jy = sum((x.^2+z.^2).*m);
Jz = sum((x.^2+y.^2).*m);

Jxy = sum((x.*y).*m);
Jyz = sum((y.*z).*m);
Jxz = sum((x.*z).*m);

J = [Jx, -Jxy, -Jxz;
     -Jxy, Jy, -Jyz;
     -Jxz, -Jyz, Jz]
```

```
J =
```

0.03872	0	0
0	0.01352	0
0	0	0.05224

Problem 5, Part B

```
x = [x;0.05];
y = [y;0];
z = [z;0.1];
m = [m;0.3];

Jx = sum((y.^2+z.^2).*m);
Jy = sum((x.^2+z.^2).*m);
Jz = sum((x.^2+y.^2).*m);
```
