Allen Kuo

Part and Mass in kilgrams (kg)

```
motorMass = 0.046; % Motor
propMass = 0.0145; % Propeller
motorNum = 4; % Amount of motors

battMass = 0.270; % Battery
contMass = 0.011; % Controller - Speedy Bee

bodyMass = 0.612; % Body Part
frameMass = 0.171; % Frame Part
arm1Mass = 0.045; % Arm1 Part
arm2Mass = 0.042; % Arm2 Part
armNum = 2;

gravity = 9.81; % Gravity m/s^2
```

Part Dimensions in meters (m) and in

```
in2m = 39.3701; % Inches to meters
arm1Length = 5.7052/in2m;
arm1Width = 1.38/in2m;
arm1Thick = 0.25/in2m;

arm2Length = 5.2867/in2m;
arm2Width = 1.38/in2m;
arm2Thick = 0.25/in2m;
```

Weight Formula

```
totalMass = (motorMass + propMass)*motorNum + (arm1Mass + arm2Mass)*armNum +
(bodyMass + frameMass + battMass + contMass); % Mass in kg
totalWeight = totalMass * gravity; % Weight in N
disp("Total Mass of Drone is " + totalMass + " kg")
```

```
Total Mass of Drone is 1.48 kg
```

```
disp("Total Weight of Drone is " + totalWeight + " N")
```

```
Total Weight of Drone is 14.5188 N
```

```
disp("Missing Tie Down parts")
```

```
Missing Tie Down parts
```