```
03 05 2015; 10:04:26AM DAS Application Started
03 05 2015; 10:04:26AM Opened Project C:\Program Files (x86)\NASA\DAS
2.0\aerocube_DAS\ac5c_ac7\
03 05 2015; 10:04:53AM Mission Editor Changes Applied
03 05 2015; 10:05:06AM Processing Requirement 4.3-1:     Return Status :
Passed

==============
Project Data
==============
      Objects Passing Through LEO = True
      Number of Objects = 1

**INPUT**
      Quantity = 10
      Final Area-To-Mass Ratio = 0.063000 (m^2/kg)
      Perigee Altitude = 500.000000 (km)
      Apogee Altitude = 780.000000 (km)
      Inclination = 64.000000 (deg)
      RAAN = -1.000000 (deg)
      Argument of Perigee = -1.000000 (deg)
      Mean Anomaly = -1.000000 (deg)
      Released Year = 2015.000000 (yr)

**OUTPUT**
      Perigee Altitude = -6378.136000 (km)
      Apogee Altitude = -6378.136000 (km)
      Inclination = 0.000000 (deg)
      Lifetime = 6.533904 (yr)
      Object Reentered within 25 years of Release = True
      Object-Time = 65.297741 (obj-yrs)
      Total Object-Time = 65.297741 (obj-yrs)
      Status = Pass
       Returned Error Message - Normal Processing

==============

=============== End of Requirement 4.3-1 ===============
03 05 2015; 10:05:11AM Processing Requirement 4.3-2: Return Status :
Passed

====================
No Project Data Available
====================

=============== End of Requirement 4.3-2 ===============
03 05 2015; 10:05:15AM Requirement 4.4-3:  Compliant

=============== End of Requirement 4.4-3 ===============
03 05 2015; 10:05:47AM Processing Requirement 4.5-1:     Return Status :
Passed

==============
Run Data
```

==========

INPUT

Space Structure Name = AC5C complete
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.011000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 2.100000 (kg)
Final Mass = 2.100000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000001
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AC5C shell
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.108000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.213000 (kg)
Final Mass = 0.213000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)

PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Battery bracket 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.105000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.012000 (kg)
Final Mass = 0.012000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Reaction wheel block 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)

RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.054000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.015000 (kg)
Final Mass = 0.015000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Antenna 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.047000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.016000 (kg)
Final Mass = 0.007000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing

Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Battery 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.031000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.017000 (kg)
Final Mass = 0.017000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AVO 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.040000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.023000 (kg)
Final Mass = 0.023000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False

Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Circuit Boards 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.037000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.030000 (kg)
Final Mass = 0.030000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = ADIS 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.023000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.049000 (kg)
Final Mass = 0.049000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AC5C Lids
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.042000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.086000 (kg)
Final Mass = 0.086000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Payload interface plate 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.038000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.092000 (kg)
Final Mass = 0.092000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = STIM 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.016000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.110000 (kg)

Final Mass = 0.110000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Pea Placer 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.014000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.117000 (kg)
Final Mass = 0.117000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = EM Assembly 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.018000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.275000 (kg)
Final Mass = 0.275000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Payload Assembly 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.016000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.573000 (kg)
Final Mass = 0.573000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)

PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Body Structure 5C
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.026000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.582000 (kg)
Final Mass = 0.582000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AeroCube7 complete
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)

Final Area-To-Mass Ratio = 0.008000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 2.500000 (kg)
Final Mass = 2.500000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000001
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = AeroCube7 shell
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.108000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.213000 (kg)
Final Mass = 0.213000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Wing Assembly AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.159619 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Anti-Nadir Lid Assembly AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.097202 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.058300 (kg)
Final Mass = 0.058300 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)

PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Camera Lens (Xenoplan/Schneider) AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.015845 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.087200 (kg)
Final Mass = 0.087200 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Rate Gyro Assembly AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)

RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.029592 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.095000 (kg)
Final Mass = 0.095000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Nadir Lid Assembly AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.031117 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.187000 (kg)
Final Mass = 0.187000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing

Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Laser Comm Plate AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.032464 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.220700 (kg)
Final Mass = 0.220700 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Laser Isolator AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.007987 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.227000 (kg)
Final Mass = 0.227000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False

Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Body Assembly AC7
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.052167 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.450000 (kg)
Final Mass = 0.450000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

INPUT

Space Structure Name = Electronics module with batteries AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.017121 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.514000 (kg)
Final Mass = 0.514000 (kg)
Duration = 1.000000 (yr)
Station-Kept = False
Abandoned = True
PMD Perigee Altitude = -1.000000 (km)
PMD Apogee Altitude = -1.000000 (km)
PMD Inclination = 0.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Collision Probability = 0.000000
Returned Error Message: Normal Processing
Date Range Error Message: Normal Date Range
Status = Pass

==========

========== End of Requirement 4.5-1 ==========
03 05 2015; 10:06:07AM Requirement 4.5-2: Compliant
03 05 2015; 10:06:08AM Processing Requirement 4.6 Return Status :
Passed

==========
Project Data
==========

INPUT

Space Structure Name = AC5C complete
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.011000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 2.100000 (kg)
Final Mass = 2.100000 (kg)
Duration = 1.000000 (yr)

Station Kept = False
Abandoned = True
PMD Perigee Altitude = 504.517772 (km)
PMD Apogee Altitude = 766.419663 (km)
PMD Inclination = 63.999887 (deg)
PMD RAAN = 297.815204 (deg)
PMD Argument of Perigee = 305.966449 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 504.517772 (km)
Suggested Apogee Altitude = 766.419663 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2033 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AC5C shell
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.108000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.213000 (kg)
Final Mass = 0.213000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 490.397368 (km)
PMD Apogee Altitude = 683.601981 (km)
PMD Inclination = 63.991863 (deg)
PMD RAAN = 283.542880 (deg)
PMD Argument of Perigee = 305.053030 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 490.397368 (km)
Suggested Apogee Altitude = 683.601981 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61

Compliance Status = Pass

==========

INPUT

Space Structure Name = Battery bracket 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.105000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.012000 (kg)
Final Mass = 0.012000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 491.019649 (km)
PMD Apogee Altitude = 686.646817 (km)
PMD Inclination = 63.992172 (deg)
PMD RAAN = 284.051459 (deg)
PMD Argument of Perigee = 305.091474 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 491.019649 (km)
Suggested Apogee Altitude = 686.646817 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Reaction wheel block 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.054000 (m^2/kg)
Start Year = 2015.000000 (yr)

Initial Mass = 0.015000 (kg)
Final Mass = 0.015000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 499.448726 (km)
PMD Apogee Altitude = 732.995084 (km)
PMD Inclination = 63.996652 (deg)
PMD RAAN = 291.963150 (deg)
PMD Argument of Perigee = 305.632569 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 499.448726 (km)
Suggested Apogee Altitude = 732.995084 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Antenna 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.047000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.016000 (kg)
Final Mass = 0.007000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.500650 (km)
PMD Apogee Altitude = 759.324148 (km)
PMD Inclination = 63.999204 (deg)
PMD RAAN = 296.565610 (deg)
PMD Argument of Perigee = 305.899073 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 503.500650 (km)
Suggested Apogee Altitude = 759.324148 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Battery 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.031000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.017000 (kg)
Final Mass = 0.017000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 502.324863 (km)
PMD Apogee Altitude = 751.373399 (km)
PMD Inclination = 63.998441 (deg)
PMD RAAN = 295.169671 (deg)
PMD Argument of Perigee = 305.821202 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 502.324863 (km)
Suggested Apogee Altitude = 751.373399 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AVO 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)

Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.040000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.023000 (kg)
Final Mass = 0.023000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 501.249619 (km)
PMD Apogee Altitude = 744.330866 (km)
PMD Inclination = 63.997765 (deg)
PMD RAAN = 293.937340 (deg)
PMD Argument of Perigee = 305.750114 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 501.249619 (km)
Suggested Apogee Altitude = 744.330866 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Circuit Boards 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.037000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.030000 (kg)
Final Mass = 0.030000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 501.614774 (km)
PMD Apogee Altitude = 746.698540 (km)
PMD Inclination = 63.997992 (deg)
PMD RAAN = 294.351180 (deg)
PMD Argument of Perigee = 305.774234 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 501.614774 (km)
Suggested Apogee Altitude = 746.698540 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = ADIS 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.023000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.049000 (kg)
Final Mass = 0.049000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.232470 (km)
PMD Apogee Altitude = 757.487277 (km)
PMD Inclination = 63.999028 (deg)
PMD RAAN = 296.242686 (deg)
PMD Argument of Perigee = 305.881307 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 503.232470 (km)
Suggested Apogee Altitude = 757.487277 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AC5C Lids
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)

Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.042000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.086000 (kg)
Final Mass = 0.086000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 501.002406 (km)
PMD Apogee Altitude = 742.740597 (km)
PMD Inclination = 63.997604 (deg)
PMD RAAN = 293.659653 (deg)
PMD Argument of Perigee = 305.734102 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 501.002406 (km)
Suggested Apogee Altitude = 742.740597 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Payload interface plate 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.038000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.092000 (kg)
Final Mass = 0.092000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 501.493822 (km)
PMD Apogee Altitude = 745.911530 (km)
PMD Inclination = 63.997917 (deg)
PMD RAAN = 294.213580 (deg)
PMD Argument of Perigee = 305.766240 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 501.493822 (km)
Suggested Apogee Altitude = 745.911530 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = STIM 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.016000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.110000 (kg)
Final Mass = 0.110000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.992724 (km)
PMD Apogee Altitude = 762.731263 (km)
PMD Inclination = 63.999532 (deg)
PMD RAAN = 297.165215 (deg)
PMD Argument of Perigee = 305.931672 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 503.992724 (km)
Suggested Apogee Altitude = 762.731263 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2025 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Pea Placer 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.014000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.117000 (kg)
Final Mass = 0.117000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 504.204478 (km)
PMD Apogee Altitude = 764.212132 (km)
PMD Inclination = 63.999675 (deg)
PMD RAAN = 297.426086 (deg)
PMD Argument of Perigee = 305.945698 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 504.204478 (km)
Suggested Apogee Altitude = 764.212132 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2029 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = EM Assembly 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.018000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.275000 (kg)
Final Mass = 0.275000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.778579 (km)
PMD Apogee Altitude = 761.242631 (km)
PMD Inclination = 63.999389 (deg)

PMD RAAN = 296.903147 (deg)
PMD Argument of Perigee = 305.917485 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 503.778579 (km)
Suggested Apogee Altitude = 761.242631 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2024 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Payload Assembly 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.016000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.573000 (kg)
Final Mass = 0.573000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.992724 (km)
PMD Apogee Altitude = 762.731263 (km)
PMD Inclination = 63.999532 (deg)
PMD RAAN = 297.165215 (deg)
PMD Argument of Perigee = 305.931672 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 503.992724 (km)
Suggested Apogee Altitude = 762.731263 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2025 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Body Structure 5C
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.026000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.582000 (kg)
Final Mass = 0.582000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 502.897142 (km)
PMD Apogee Altitude = 755.210040 (km)
PMD Inclination = 63.998809 (deg)
PMD RAAN = 295.842693 (deg)
PMD Argument of Perigee = 305.859094 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 502.897142 (km)
Suggested Apogee Altitude = 755.210040 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AeroCube7 complete
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.008000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 2.500000 (kg)
Final Mass = 2.500000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True

PMD Perigee Altitude = 504.825981 (km)
PMD Apogee Altitude = 768.610602 (km)
PMD Inclination = 64.000099 (deg)
PMD RAAN = 298.201727 (deg)
PMD Argument of Perigee = 305.986856 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 504.825981 (km)
Suggested Apogee Altitude = 768.610602 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2036 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = AeroCube7 shell
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.108000 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.213000 (kg)
Final Mass = 0.213000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 490.397368 (km)
PMD Apogee Altitude = 683.601981 (km)
PMD Inclination = 63.991863 (deg)
PMD RAAN = 283.542880 (deg)
PMD Argument of Perigee = 305.053030 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 490.397368 (km)
Suggested Apogee Altitude = 683.601981 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Wing Assembly AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.159619 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 475.418422 (km)
PMD Apogee Altitude = 621.976263 (km)
PMD Inclination = 63.985813 (deg)
PMD RAAN = 273.682948 (deg)
PMD Argument of Perigee = 304.185027 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 475.418422 (km)
Suggested Apogee Altitude = 621.976263 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2016 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Anti-Nadir Lid Assembly AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.097202 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.058300 (kg)
Final Mass = 0.058300 (kg)

Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 492.556997 (km)
PMD Apogee Altitude = 694.364316 (km)
PMD Inclination = 63.992924 (deg)
PMD RAAN = 285.347571 (deg)
PMD Argument of Perigee = 305.188005 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 492.556997 (km)
Suggested Apogee Altitude = 694.364316 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Camera Lens (Xenoplan/Schneider) AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.015845 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.087200 (kg)
Final Mass = 0.087200 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 504.009242 (km)
PMD Apogee Altitude = 762.846462 (km)
PMD Inclination = 63.999543 (deg)
PMD RAAN = 297.185502 (deg)
PMD Argument of Perigee = 305.932767 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 504.009242 (km)
Suggested Apogee Altitude = 762.846462 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2026 (yr)

Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Rate Gyro Assembly AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.029592 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.095000 (kg)
Final Mass = 0.095000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 502.487702 (km)
PMD Apogee Altitude = 752.458775 (km)
PMD Inclination = 63.998545 (deg)
PMD RAAN = 295.359951 (deg)
PMD Argument of Perigee = 305.831982 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 502.487702 (km)
Suggested Apogee Altitude = 752.458775 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Nadir Lid Assembly AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.031117 (m^2/kg)

Start Year = 2015.000000 (yr)
Initial Mass = 0.187000 (kg)
Final Mass = 0.187000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 502.311284 (km)
PMD Apogee Altitude = 751.283123 (km)
PMD Inclination = 63.998432 (deg)
PMD RAAN = 295.153848 (deg)
PMD Argument of Perigee = 305.820303 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 502.311284 (km)
Suggested Apogee Altitude = 751.283123 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Laser Comm Plate AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.032464 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.220700 (kg)
Final Mass = 0.220700 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 502.153973 (km)
PMD Apogee Altitude = 750.239827 (km)
PMD Inclination = 63.998332 (deg)
PMD RAAN = 294.971019 (deg)
PMD Argument of Perigee = 305.809895 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 502.153973 (km)
Suggested Apogee Altitude = 750.239827 (km)

Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Laser Isolator AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.007987 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.227000 (kg)
Final Mass = 0.227000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 504.827287 (km)
PMD Apogee Altitude = 768.619930 (km)
PMD Inclination = 64.000099 (deg)
PMD RAAN = 298.203373 (deg)
PMD Argument of Perigee = 305.986942 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 504.827287 (km)
Suggested Apogee Altitude = 768.619930 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2036 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Body Assembly AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)

Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.052167 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.450000 (kg)
Final Mass = 0.450000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 499.694177 (km)
PMD Apogee Altitude = 734.507296 (km)
PMD Inclination = 63.996799 (deg)
PMD RAAN = 292.225743 (deg)
PMD Argument of Perigee = 305.648627 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 499.694177 (km)
Suggested Apogee Altitude = 734.507296 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Electronics module with batteries AC7
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 780.000000 (km)
Inclination = 64.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.017121 (m^2/kg)
Start Year = 2015.000000 (yr)
Initial Mass = 0.514000 (kg)
Final Mass = 0.514000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 503.873033 (km)
PMD Apogee Altitude = 761.898117 (km)
PMD Inclination = 63.999452 (deg)
PMD RAAN = 297.018525 (deg)
PMD Argument of Perigee = 305.923743 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

```
      Suggested Perigee Altitude = 503.873033 (km)
      Suggested Apogee Altitude = 761.898117 (km)
      Returned Error Message = Passes LEO reentry orbit criteria.

      Released Year = 2025 (yr)
      Requirement = 61
      Compliance Status = Pass

==============

============== End of Requirement 4.6 ==============
03 05 2015; 10:06:16AM *********Processing Requirement 4.7-1
      Return Status :  Passed

***********INPUT****
 Item Number = 1

name = AC5C complete
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 2.100000
Thermal Mass = 2.100000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

name = AC5C complete
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.100000
Thermal Mass = 2.100000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

*************OUTPUT****
Item Number = 1

name = AC5C complete
Demise Altitude = 77.996762
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = AC5C complete
Demise Altitude = 65.852777
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************

**********INPUT****
 Item Number = 2

name = AC5C shell
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.213000
Thermal Mass = 0.213000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

name = Battery bracket 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.026000
Length = 0.090000
Height = 0.013000

name = Reaction wheel block 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.015000
Thermal Mass = 0.015000
Diameter/Width = 0.028000
Length = 0.029000
Height = 0.028000

name = Antenna 5C inside shell
quantity = 1
parent = 1
materialID = 1
type = Flat Plate
Aero Mass = 0.007000
Thermal Mass = 0.007000
Diameter/Width = 0.040000
Length = 0.050000

name = Battery 5C inside shell
quantity = 1
parent = 1
materialID = 56
type = Cylinder
Aero Mass = 0.017000
```

Thermal Mass = 0.017000
Diameter/Width = 0.016000
Length = 0.033000

name = AVO 5C inside shell
quantity = 1
parent = 1
materialID = 56
type = Cylinder
Aero Mass = 0.023000
Thermal Mass = 0.023000
Diameter/Width = 0.026000
Length = 0.040000

name = Circuit Boards 5C inside
quantity = 1
parent = 1
materialID = 23
type = Flat Plate
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.056000
Length = 0.056000

name = ADIS 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.049000
Thermal Mass = 0.049000
Diameter/Width = 0.044000
Length = 0.047000
Height = 0.014000

name = AC5C Lids inside shell
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.086000
Thermal Mass = 0.086000
Diameter/Width = 0.096000
Length = 0.105000

name = Payload interface plate 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.092000
Thermal Mass = 0.092000
Diameter/Width = 0.097000
Length = 0.097000

```
name = STIM 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.110000
Thermal Mass = 0.110000
Diameter/Width = 0.048000
Length = 0.053000
Height = 0.026000

name = Pea Placer 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.117000
Thermal Mass = 0.117000
Diameter/Width = 0.037000
Length = 0.043000

name = EM Assembly 5C inside shell
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.275000
Thermal Mass = 0.275000
Diameter/Width = 0.078000
Length = 0.089000
Height = 0.047000

name = Payload Assembly 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.573000
Thermal Mass = 0.573000
Diameter/Width = 0.097000
Length = 0.097000
Height = 0.092000

name = Body Structure 5C inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.582000
Thermal Mass = 0.582000
Diameter/Width = 0.105000
Length = 0.165000
Height = 0.105000
```

```
name = pea 5C inside shell
quantity = 10
parent = 1
materialID = 14
type = Cylinder
Aero Mass = 0.001200
Thermal Mass = 0.001200
Diameter/Width = 0.008000
Length = 0.013000

**************OUTPUT****
Item Number = 2

name = AC5C shell
Demise Altitude = 77.991105
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Battery bracket 5C inside shell
Demise Altitude = 75.816761
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Reaction wheel block 5C inside shell
Demise Altitude = 73.382261
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Antenna 5C inside shell
Demise Altitude = 0.000000
Debris Casualty Area = 0.415666
Impact Kinetic Energy = 0.399737

************************************
name = Battery 5C inside shell
Demise Altitude = 0.000000
Debris Casualty Area = 0.388102
Impact Kinetic Energy = 5.519667

************************************
name = AVO 5C inside shell
Demise Altitude = 0.000000
Debris Casualty Area = 0.399739
Impact Kinetic Energy = 4.963173

************************************
name = Circuit Boards 5C inside
Demise Altitude = 73.138019
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************
name = ADIS 5C inside shell
Demise Altitude = 68.033019
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = AC5C Lids inside shell
Demise Altitude = 69.516831
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Payload interface plate 5C inside shell
Demise Altitude = 68.353425
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = STIM 5C inside shell
Demise Altitude = 63.922405
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Pea Placer 5C inside shell
Demise Altitude = 61.325351
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = EM Assembly 5C inside shell
Demise Altitude = 66.774206
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Payload Assembly 5C inside shell
Demise Altitude = 56.863995
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Body Structure 5C inside shell
Demise Altitude = 64.730757
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = pea 5C inside shell
Demise Altitude = 76.496277
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************

***********INPUT****
 Item Number = 3

name = Battery bracket 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.026000
Length = 0.090000
Height = 0.013000

name = Battery bracket 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.026000
Length = 0.090000
Height = 0.013000

*************OUTPUT****
Item Number = 3

name = Battery bracket 5C
Demise Altitude = 77.996176
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Battery bracket 5C
Demise Altitude = 72.020433
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 4

name = Reaction wheel block 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.015000
Thermal Mass = 0.015000
```

```
Diameter/Width = 0.028000
Length = 0.029000
Height = 0.028000

name = Reaction wheel block 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.015000
Thermal Mass = 0.015000
Diameter/Width = 0.028000
Length = 0.029000
Height = 0.028000

**************OUTPUT****
Item Number = 4

name = Reaction wheel block 5C
Demise Altitude = 77.999855
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Reaction wheel block 5C
Demise Altitude = 73.042949
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 5

name = Antenna 5C
quantity = 1
parent = 0
materialID = 1
type = Flat Plate
Aero Mass = 0.007000
Thermal Mass = 0.007000
Diameter/Width = 0.040000
Length = 0.050000

name = Antenna 5C
quantity = 1
parent = 1
materialID = 1
type = Flat Plate
Aero Mass = 0.007000
Thermal Mass = 0.007000
Diameter/Width = 0.040000
Length = 0.050000
```

```
**************OUTPUT****
Item Number = 5

name = Antenna 5C
Demise Altitude = 77.985316
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Antenna 5C
Demise Altitude = 0.000000
Debris Casualty Area = 0.415666
Impact Kinetic Energy = 0.399736

************************************

***********INPUT****
 Item Number = 6

name = Battery 5C
quantity = 1
parent = 0
materialID = 56
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.016000

name = Battery 5C
quantity = 1
parent = 1
materialID = 56
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.016000
Length = 0.033000

**************OUTPUT****
Item Number = 6

name = Battery 5C
Demise Altitude = 77.991347
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Battery 5C
Demise Altitude = 0.000000
Debris Casualty Area = 0.388102
Impact Kinetic Energy = 5.519701

************************************
```

```
***********INPUT****
 Item Number = 7

name = AVO 5C
quantity = 1
parent = 0
materialID = 56
type = Cylinder
Aero Mass = 0.023000
Thermal Mass = 0.023000
Diameter/Width = 0.026000

name = AVO 5C
quantity = 1
parent = 1
materialID = 56
type = Cylinder
Aero Mass = 0.023000
Thermal Mass = 0.023000
Diameter/Width = 0.026000
Length = 0.040000

*************OUTPUT****
Item Number = 7

name = AVO 5C
Demise Altitude = 77.999738
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = AVO 5C
Demise Altitude = 0.000000
Debris Casualty Area = 0.399739
Impact Kinetic Energy = 4.963246

************************************

***********INPUT****
 Item Number = 8

name = Circuit Boards 5C
quantity = 1
parent = 0
materialID = 23
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.056000

name = Circuit Boards 5C
quantity = 1
parent = 1
materialID = 23
```

type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.056000
Length = 0.056000

**********OUTPUT****
Item Number = 8

name = Circuit Boards 5C
Demise Altitude = 77.991512
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = Circuit Boards 5C
Demise Altitude = 74.050277
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

**********INPUT****
 Item Number = 9

name = ADIS 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.049000
Thermal Mass = 0.049000
Diameter/Width = 0.044000
Length = 0.047000
Height = 0.014000

name = ADIS 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.049000
Thermal Mass = 0.049000
Diameter/Width = 0.044000
Length = 0.047000
Height = 0.014000

**********OUTPUT****
Item Number = 9

name = ADIS 5C
Demise Altitude = 77.991215
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

```
************************************
name = ADIS 5C
Demise Altitude = 71.580089
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 10

name = AC5C Lids
quantity = 1
parent = 0
materialID = 8
type = Flat Plate
Aero Mass = 0.086000
Thermal Mass = 0.086000
Diameter/Width = 0.096000
Length = 0.105000

name = AC5C Lids
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.086000
Thermal Mass = 0.086000
Diameter/Width = 0.096000
Length = 0.105000

**************OUTPUT****
Item Number = 10

name = AC5C Lids
Demise Altitude = 77.991832
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = AC5C Lids
Demise Altitude = 69.910308
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 11

name = Payload interface plate 5C
quantity = 1
parent = 0
```

```
materialID = 8
type = Flat Plate
Aero Mass = 0.092000
Thermal Mass = 0.092000
Diameter/Width = 0.097000
Length = 0.097000

name = Payload interface plate 5C
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.092000
Thermal Mass = 0.092000
Diameter/Width = 0.097000
Length = 0.097000

**************OUTPUT****
Item Number = 11

name = Payload interface plate 5C
Demise Altitude = 77.997066
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Payload interface plate 5C
Demise Altitude = 69.920074
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 12

name = STIM 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.110000
Thermal Mass = 0.110000
Diameter/Width = 0.048000
Length = 0.053000
Height = 0.026000

name = STIM 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.110000
Thermal Mass = 0.110000
```

```
Diameter/Width = 0.048000
Length = 0.053000
Height = 0.026000

**************OUTPUT****
Item Number = 12

name = STIM 5C
Demise Altitude = 77.992051
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = STIM 5C
Demise Altitude = 70.822785
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 13

name = Pea Placer 5C
quantity = 1
parent = 0
materialID = 8
type = Cylinder
Aero Mass = 0.117000
Thermal Mass = 0.117000
Diameter/Width = 0.037000

name = Pea Placer 5C
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.117000
Thermal Mass = 0.117000
Diameter/Width = 0.037000
Length = 0.043000

**************OUTPUT****
Item Number = 13

name = Pea Placer 5C
Demise Altitude = 77.998246
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Pea Placer 5C
Demise Altitude = 71.129480
Debris Casualty Area = 0.000000
```

Impact Kinetic Energy = 0.000000

****

**********INPUT****
 Item Number = 14

name = EM Assembly 5C
quantity = 1
parent = 0
materialID = 23
type = Box
Aero Mass = 0.275000
Thermal Mass = 0.275000
Diameter/Width = 0.078000
Length = 0.089000
Height = 0.047000

name = EM Assembly 5C
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.275000
Thermal Mass = 0.275000
Diameter/Width = 0.078000
Length = 0.089000
Height = 0.047000

**********OUTPUT****
Item Number = 14

name = EM Assembly 5C
Demise Altitude = 77.998340
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = EM Assembly 5C
Demise Altitude = 72.396949
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

**********INPUT****
 Item Number = 15

name = Payload Assembly 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.573000

```
Thermal Mass = 0.573000
Diameter/Width = 0.097000
Length = 0.097000
Height = 0.092000

name = Payload Assembly 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.573000
Thermal Mass = 0.573000
Diameter/Width = 0.097000
Length = 0.097000
Height = 0.092000

**************OUTPUT****
Item Number = 15

name = Payload Assembly 5C
Demise Altitude = 77.994965
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Payload Assembly 5C
Demise Altitude = 68.783449
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 16

name = Body Structure 5C
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.582000
Thermal Mass = 0.582000
Diameter/Width = 0.105000
Length = 0.165000
Height = 0.105000

name = Body Structure 5C
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.582000
Thermal Mass = 0.582000
Diameter/Width = 0.105000
```

```
Length = 0.165000
Height = 0.105000

**************OUTPUT****
Item Number = 16

name = Body Structure 5C
Demise Altitude = 77.992472
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Body Structure 5C
Demise Altitude = 70.848621
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 17

name = AeroCube7 Complete
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 2.500000
Thermal Mass = 2.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

name = AeroCube7 Complete
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.500000
Thermal Mass = 2.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

**************OUTPUT****
Item Number = 17

name = AeroCube7 Complete
Demise Altitude = 77.994621
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = AeroCube7 Complete
```

```
Demise Altitude = 64.838577
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 18

name = AeroCube7 shell
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.213000
Thermal Mass = 0.213000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

name = Wing Assembly AC7 inside shell
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.079000
Length = 0.150000
Height = 0.025000

name = Anti-Nadir Lid Assembly AC7 inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.058300
Thermal Mass = 0.058300
Diameter/Width = 0.103000
Length = 0.108000
Height = 0.002000

name = Camera Lens (Xenoplan/Schneider) AC7 inside shell
quantity = 1
parent = 1
materialID = 9
type = Cylinder
Aero Mass = 0.087200
Thermal Mass = 0.087200
Diameter/Width = 0.032000
Length = 0.039000

name = Rate Gyro Assembly AC7 inside shell
quantity = 1
```

parent = 1
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.048000
Length = 0.060000
Height = 0.025000

name = Nadir Lid Assembly AC7 inside shell
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.187000
Thermal Mass = 0.187000
Diameter/Width = 0.102000
Length = 0.108000

name = Laser Comm Plate AC7 inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.220700
Thermal Mass = 0.220700
Diameter/Width = 0.102000
Length = 0.103000
Height = 0.019000

name = Laser Isolator AC7 inside shell
quantity = 1
parent = 1
materialID = -4
type = Cylinder
Aero Mass = 0.227000
Thermal Mass = 0.227000
Diameter/Width = 0.027000
Length = 0.072000

name = Body Assembly AC7 inside shell
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.450000
Thermal Mass = 0.450000
Diameter/Width = 0.113000
Length = 0.160000
Height = 0.106000

name = Electronics module with batteries AC7 inside shell
quantity = 1
parent = 1

```
materialID = 23
type = Box
Aero Mass = 0.514000
Thermal Mass = 0.514000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.070000

**************OUTPUT****
Item Number = 18

name = AeroCube7 shell
Demise Altitude = 77.991105
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Wing Assembly AC7 inside shell
Demise Altitude = 74.688644
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Anti-Nadir Lid Assembly AC7 inside shell
Demise Altitude = 72.097839
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Camera Lens (Xenoplan/Schneider) AC7 inside shell
Demise Altitude = 62.675190
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Rate Gyro Assembly AC7 inside shell
Demise Altitude = 66.377113
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Nadir Lid Assembly AC7 inside shell
Demise Altitude = 61.758249
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Laser Comm Plate AC7 inside shell
Demise Altitude = 61.883296
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Laser Isolator AC7 inside shell
```

```
Demise Altitude = 58.729425
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Body Assembly AC7 inside shell
Demise Altitude = 66.807409
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Electronics module with batteries AC7 inside shell
Demise Altitude = 61.503335
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 19

name = Wing Assembly AC7
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.079000
Length = 0.150000
Height = 0.025000

name = Wing Assembly AC7
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.079000
Length = 0.150000
Height = 0.025000

**********OUTPUT****
Item Number = 19

name = Wing Assembly AC7
Demise Altitude = 77.999207
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Wing Assembly AC7
Demise Altitude = 0.000000
```

```
Debris Casualty Area = 0.473781
Impact Kinetic Energy = 4.371024

************************************

**********INPUT****
 Item Number = 20

name = Anti-Nadir Lid Assembly AC7
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.058300
Thermal Mass = 0.058300
Diameter/Width = 0.103000
Length = 0.108000
Height = 0.002000

name = Anti-Nadir Lid Assembly AC7
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.058300
Thermal Mass = 0.058300
Diameter/Width = 0.103000
Length = 0.108000
Height = 0.002000

**********OUTPUT****
Item Number = 20

name = Anti-Nadir Lid Assembly AC7
Demise Altitude = 77.997793
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Anti-Nadir Lid Assembly AC7
Demise Altitude = 0.000000
Debris Casualty Area = 0.456029
Impact Kinetic Energy = 6.635758

************************************

**********INPUT****
 Item Number = 21

name = Camera Lens (Xenoplan/Schneider) AC7
quantity = 1
parent = 0
materialID = 9
type = Cylinder
```

```
Aero Mass = 0.087200
Thermal Mass = 0.087200
Diameter/Width = 0.032000

name = Camera Lens (Xenoplan/Schneider) AC7
quantity = 1
parent = 1
materialID = 9
type = Cylinder
Aero Mass = 0.087200
Thermal Mass = 0.087200
Diameter/Width = 0.032000
Length = 0.039000

**************OUTPUT****
Item Number = 21

name = Camera Lens (Xenoplan/Schneider) AC7
Demise Altitude = 77.993418
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Camera Lens (Xenoplan/Schneider) AC7
Demise Altitude = 71.618410
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 22

name = Rate Gyro Assembly AC7
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.048000
Length = 0.060000
Height = 0.025000

name = Rate Gyro Assembly AC7
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.048000
Length = 0.060000
Height = 0.025000
```

```
**************OUTPUT****
Item Number = 22

name = Rate Gyro Assembly AC7
Demise Altitude = 77.999777
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Rate Gyro Assembly AC7
Demise Altitude = 71.469589
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 23

name = Nadir Lid Assembly AC7
quantity = 1
parent = 0
materialID = 8
type = Flat Plate
Aero Mass = 0.187000
Thermal Mass = 0.187000
Diameter/Width = 0.102000
Length = 0.108000

name = Nadir Lid Assembly AC7
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.187000
Thermal Mass = 0.187000
Diameter/Width = 0.102000
Length = 0.108000

**************OUTPUT****
Item Number = 23

name = Nadir Lid Assembly AC7
Demise Altitude = 77.996293
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Nadir Lid Assembly AC7
Demise Altitude = 69.051535
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************

**********INPUT****
 Item Number = 24

name = Laser Comm Plate AC7
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.220700
Thermal Mass = 0.220700
Diameter/Width = 0.102000
Length = 0.103000
Height = 0.019000

name = Laser Comm Plate AC7
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.220700
Thermal Mass = 0.220700
Diameter/Width = 0.102000
Length = 0.103000
Height = 0.019000

**********OUTPUT****
Item Number = 24

name = Laser Comm Plate AC7
Demise Altitude = 77.996980
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Laser Comm Plate AC7
Demise Altitude = 69.000456
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 25

name = Laser Isolator AC7
quantity = 1
parent = 0
materialID = -4
type = Cylinder
Aero Mass = 0.227000
Thermal Mass = 0.227000
Diameter/Width = 0.027000
```

```
name = Laser Isolator AC7
quantity = 1
parent = 1
materialID = -4
type = Cylinder
Aero Mass = 0.227000
Thermal Mass = 0.227000
Diameter/Width = 0.027000
Length = 0.072000

**************OUTPUT****
Item Number = 25

name = Laser Isolator AC7
Demise Altitude = 77.998801
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Laser Isolator AC7
Demise Altitude = 70.849941
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 26

name = Body Assembly AC7
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.450000
Thermal Mass = 0.450000
Diameter/Width = 0.113000
Length = 0.160000
Height = 0.106000

name = Body Assembly AC7
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.450000
Thermal Mass = 0.450000
Diameter/Width = 0.113000
Length = 0.160000
Height = 0.106000

**************OUTPUT****
Item Number = 26
```

```
name = Body Assembly AC7
Demise Altitude = 77.994910
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Body Assembly AC7
Demise Altitude = 70.893956
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 27

name = Electronics module with batteries AC7
quantity = 1
parent = 0
materialID = 23
type = Box
Aero Mass = 0.514000
Thermal Mass = 0.514000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.070000

name = Electronics module with batteries AC7
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.514000
Thermal Mass = 0.514000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.070000

**************OUTPUT****
Item Number = 27

name = Electronics module with batteries AC7
Demise Altitude = 77.997051
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Electronics module with batteries AC7
Demise Altitude = 71.188933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
```

```
***********INPUT****
 Item Number = 28

name = pea 5C
quantity = 10
parent = 0
materialID = 14
type = Cylinder
Aero Mass = 0.001200
Thermal Mass = 0.001200
Diameter/Width = 0.008000

name = pea 5C
quantity = 10
parent = 1
materialID = 14
type = Cylinder
Aero Mass = 0.001200
Thermal Mass = 0.001200
Diameter/Width = 0.008000
Length = 0.013000

*************OUTPUT****
Item Number = 28

name = pea 5C
Demise Altitude = 77.996113
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = pea 5C
Demise Altitude = 76.221933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

=============== End of Requirement 4.7-1 ===============
03 05 2015; 10:06:42AM Project Data Saved To File
```