

SOLIDWORKS Student Edition - Academic Use Only

File Edit View Insert Tools Assembly Design Task View Tools Window Help

Sketch Line Corner Circle Polygon Centerpoint Spline Smart Dimension Relation Sketch Trim Linear Sketch Entities Offset Entities Extruded Boss/Base Extruded Cut Fillet Pattern Linear Mirror Draft Shell Reference Geometry Measure Mass Properties

Basic Modeling Tools SOLIDWORKS CAM SOLIDWORKS CAM TBM Simulation Analysis Preparation

Mass Properties

lab 4 part 1

Options... Override Mass Properties... Recalculate

Include hidden bodies/components Create Center of Mass feature Show weld bead mass Report coordinate values relative to: -- default --

Mass properties of lab 4 part 1
Configuration: Default Coordinate system: -- default --
Density = 0.04 pounds per cubic inch
Mass = 0.18 pounds
Volume = 4.97 cubic inches
Surface area = 125.34 square inches
Center of mass: (inches)
X = 0.00 Y = 5.56 Z = -0.26

Principal axes of inertia and principal moments of inertia: (pounds * square inches) Taken at the center of mass.
Ix = (0.00, 0.99, -0.10) Px = 0.27
Iy = (-1.00, 0.00, 0.00) Py = 1.32
Iz = (0.00, 0.10, 0.99) Pz = 1.46

Moments of inertia: (pounds * square inches) Taken at the center of mass and aligned with the output coordinate system. (Using positive Lxx = 1.32 Lxy = 0.00 Lxz = 0.00 Lyx = 0.00 Lyy = 0.28 Lyz = -0.12 Lzx = 0.00 Lzy = -0.12 Lzz = 1.44

Moments of inertia: (pounds * square inches) Taken at the output coordinate system. (Using positive tensor notation.) Ixx = 6.87 Ixy = 0.00 Izx = 0.00 Iyx = 0.00 Iyy = 0.29 Iyz = -0.38 Izx = 0.00 Izy = -0.38 Izz = 6.98

Help Print... Copy to Clipboard

Document Type (8 more...) SOLIDWORKS Part Document (4)
SOLIDWORKS Assembly Document (3)
Microsoft Edge HTML Document (30)

motor casing...
bowl and ch...
motor casing...
motor casing...
pin.sldprt
pincap.sldprt
button.sldprt
Dome.exr
Dome.exr
Dome.png

SOLIDWORKS Mass Properties

lab 4 part 2

Options...

Include hidden bodies/components
 Create Center of Mass feature
 Show weld bead mass
Report coordinate values relative to: -- default --

Mass properties of lab 4 part 2
Configuration: Default
Coordinate system: -- default --

Density = 0.04 pounds per cubic inch
Mass = 1.37 pounds
Volume = 37.87 cubic inches
Surface area = 306.41 square inches

Center of mass: (inches)
X = 0.00
Y = 4.28
Z = -3.51

Principal axes of inertia and principal moments of inertia: (pounds * square inches)
Taken at the center of mass.
Ix = (0.00, 0.83, -0.56) Px = 2.90
Iy = (0.00, 0.56, 0.83) Py = 45.43
Iz = (1.00, 0.00, 0.00) Pz = 46.45

Moments of inertia: (pounds * square inches)
Taken at the center of mass and aligned with the output coordinate system. (Using positive tensor notation.)
Lxx = 46.45 Lxy = 0.00 Lzx = 0.00
Lyx = 0.00 Lyy = 16.46 Lyz = -19.82
Lzx = 0.00 Lzy = -19.82 Lzz = 31.87

Moments of inertia: (pounds * square inches)
Taken at the output coordinate system. (Using positive tensor notation.)
Ix = 88.36 Iy = 0.00 Iz = 0.00
Iy = 0.00 Iy = 33.31 Iz = -40.37
Iz = 0.00 Iz = -40.37 Iz = 56.93

Help Print... Copy to Clipboard

Offset Convert Mirror Entities Extruded Boss/Base Fillet Linear Pattern Reference Geometry Measure Mass Properties

Extruded Cut Draft Shell

Preparation

lab 4 part 2

Search files and models

3DEXPERIENCE Marketplace

3D VR

Extend SOLIDWORKS with the 3DEXPERIENCE Platform

Connect to the 3DEXPERIENCE platform and leverage its collaboration, product data and lifecycle management, organic shape design, simulation solutions, and more. (Subscription required.)

Use 3DEXPERIENCE Marketplace to source 3D content and services worldwide. (No license required.)

Let's get started

SOLIDWORKS Student Edition - Academic Use Only

Editing Part Simplified Interface IPS

SOLIDWORKS Student Edition - Academic Use Only

Sketch1 of lab 4 part 3*

Search files and models

Exit Sketch Line Corner Rectangle Circle Polygon Centerpoint Arc Smart Dimension Add Relation Sketch Trim Linear Sketch Pattern Entities Offset Entities Extruded Boss/Base Extruded Cut Fillet Linear Mirror Draft Shell Reference Geometry Measure Mass Properties

Basic Modeling Tools SOLIDWORKS CAM SOLIDWORKS CAM TBM Simulation Analysis Preparation

lab 4 part 3

- Equations
- Material <not specified>
- Front Plane
- Top Plane
- Right Plane
- Origin
- Revolve1
- Sketch1
- Shell1

3DEXPERIENCE Marketplace

Extend SOLIDWORKS with the 3DEXPERIENCE Platform

Connect to the 3DEXPERIENCE® platform and leverage its collaboration, product data and lifecycle management, organic shape design, simulation solutions, and more. (Subscription required.)

Use 3DEXPERIENCE Marketplace to source 3D content and services worldwide. (No license required.)

Let's get started

9.50

2.00

R1.00

R2.50

R2.00

4.00

4.00

7.00

5.13in 11.65in 0in Fully Defined Editing Sketch1 IPS Simplified Interface

SOLIDWORKS > Home > Sketch > Line > Corner > Circle > Polygon > Centerpoint > Spline > Smart Dimension > Add Relation > Sketch Entities > Linear Sketch Pattern > Offset Entities > Convert Entities > Mirror Entities > Extruded Boss/Base > Extruded Cut > Fillet > Linear Pattern > Mirror Draft Shell > Reference Geometry > Measure > Mass Properties

Basic Modeling Tools SOLIDWORKS CAM SOLIDWORKS CAM TBM Simulation Analysis Preparation

Mass Properties dialog box for "lab 4 part 3" showing the following data:

- Include hidden bodies/components**: Checked
- Create Center of Mass feature**: Unchecked
- Show weld bead mass**: Unchecked
- Report coordinate values relative to:** -- default --
- Mass properties of lab 4 part 3**
- Configuration:** Default
- Coordinate system:** -- default --
- Density** = 0.32 pounds per cubic inch
- Mass** = 5.89 pounds
- Volume** = 18.30 cubic inches
- Surface area** = 371.33 square inches
- Center of mass: (inches)**
 - X = 0.00
 - Y = 0.00
 - Z = 3.05
- Principal axes of inertia and principal moments of inertia: (pounds * square inches)**
- Taken at the center of mass.

I _x = (0.00, 0.00, 1.00)	P _x = 32.37
I _y = (1.00, 0.00, 0.00)	P _y = 68.11
I _z = (0.00, 1.00, 0.00)	P _z = 68.11

- Moments of inertia: (pounds * square inches)**
- Taken at the center of mass and aligned with the output coordinate system. (Using positive)

L _{xx} = 68.11	L _{xy} = 0.00	L _{xz} = 0.00
L _{yx} = 0.00	L _{yy} = 68.11	L _{yz} = 0.00
L _{zx} = 0.00	L _{zy} = 0.00	L _{zz} = 32.37
- Moments of inertia: (pounds * square inches)**
- Taken at the output coordinate system. (Using positive tensor notation.)

I _{xx} = 122.99	I _{xy} = 0.00	I _{xz} = 0.00
I _{yx} = 0.00	I _{yy} = 122.99	I _{yz} = 0.00
I _{zx} = 0.00	I _{zy} = 0.00	I _{zz} = 32.37

Help Print... Copy to Clipboard

The 3DEXPERIENCE Marketplace sidebar includes:

- Extend SOLIDWORKS with the 3DEXPERIENCE Platform**
- Connect to the 3DEXPERIENCE platform** and leverage its collaboration, product data and lifecycle management, organic shape design, simulation solutions, and more. (Subscription required.)
- Use 3DEXPERIENCE Marketplace to source 3D content and services worldwide.** (No license required.)
- Let's get started**