

SOLIDWORKS

lab 4 part 1

dome

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 tensor notation.)

Lxx = 1.32	Lxy = 0.00	Lxz = 0.00
Lyx = 0.00	Lyx = 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.)

lxx = 6.87	lxy = 0.00	lxz = 0.00
lyx = 0.00	lyy = 0.29	lyz = -0.38
lzx = 0.00	lzy = -0.38	lzz = 6.98

Help Print... Copy to Clipboard

SOLIDWORKS Student Edition - Academic Use Only

Editing Part Simplified Interface IPS

lab 4 part 2

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 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.
I_x = (0.00, 0.83, -0.56) P_x = 2.90
I_y = (0.00, 0.56, 0.83) P_y = 45.43
I_z = (1.00, 0.00, 0.00) P_z = 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.)
L_{xx} = 46.45 L_{xy} = 0.00 L_{xz} = 0.00
L_{yx} = 0.00 L_{yy} = 16.46 L_{yz} = -19.82
L_{zx} = 0.00 L_{zy} = -19.82 L_{zz} = 31.87

Moments of inertia: (pounds * square inches)
Taken at the output coordinate system. (Using positive tensor notation.)
I_{xx} = 88.36 I_{xy} = 0.00 I_{xz} = 0.00
I_{yx} = 0.00 I_{yy} = 33.31 I_{yz} = -40.37
I_{zx} = 0.00 I_{zy} = -40.37 I_{zz} = 56.93

Help Print... Copy to Clipboard

lab 4 part 2

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

Preparation

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.)

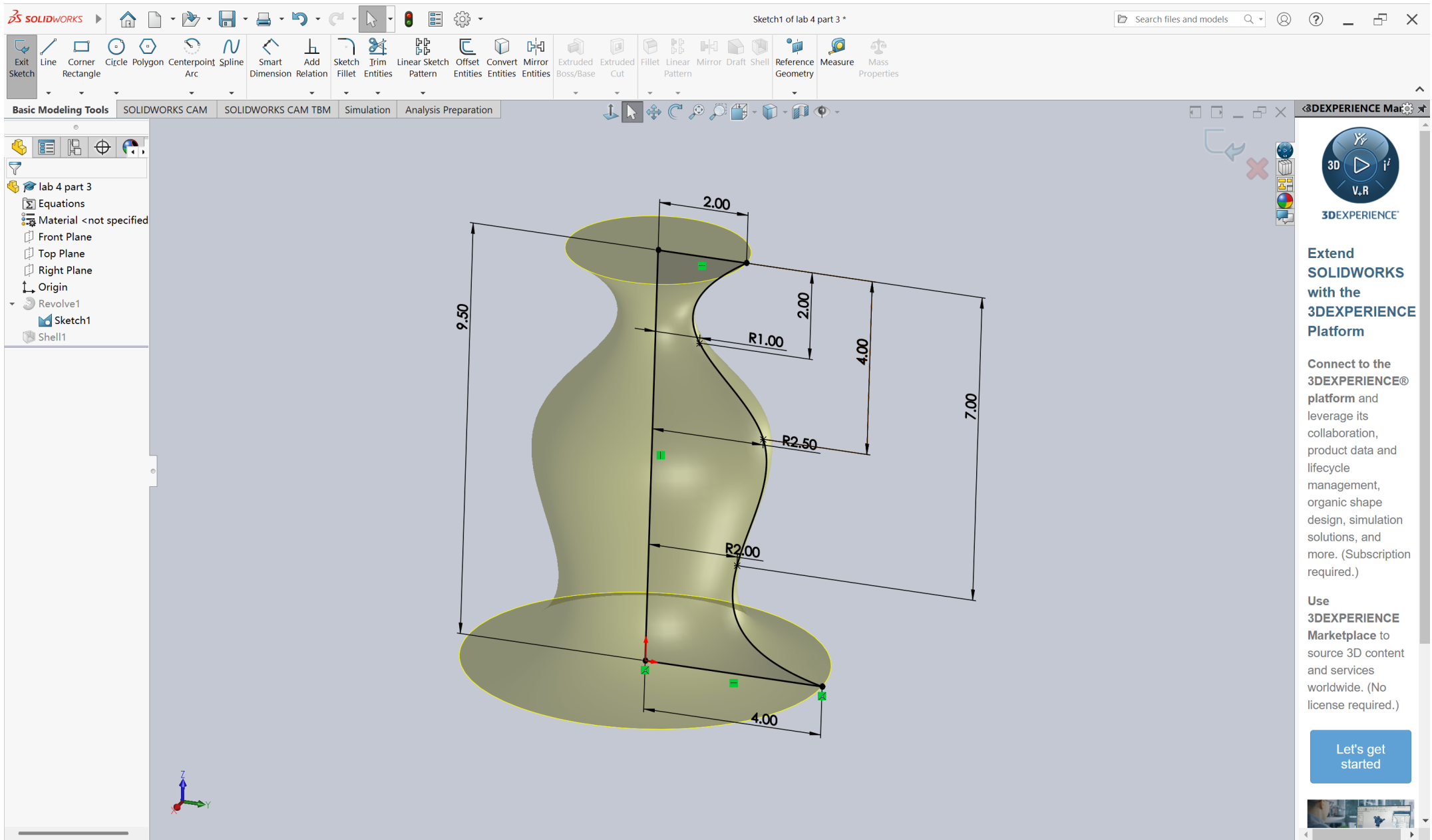
Use 3DEXPERIENCE Marketplace to source 3D content and services worldwide. (No license required.)

Let's get started

SOLIDWORKS Student Edition - Academic Use Only

Editing Part Simplified Interface IPS





SOLIDWORKS | lab 4 part 3 | Search files and models

Sketch Line Corner Rectangle Circle Polygon Centerpoint Arc Spline Smart Dimension Add Relation Sketch Fillet Trim 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

lab 4 part 3

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 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) Px = 32.37
I_y = (1.00, 0.00, 0.00) Py = 68.11
I_z = (0.00, 1.00, 0.00) Pz = 68.11

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

3DEXPERIENCE

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