extrude

Synopsis

extrude(*height*)

extrude(*axisWorld*, *height*)

Parameters

- *height* (float)
  How many units to extrude.
- *axisWorld* (selstring)
  Use a world coordinate axis as extrusion direction (`world.x | world.y | world.z`).

Extrudes the shape. Each face polygon of all meshes in the geometry asset is taken and extruded along the face normal or the given world-coordinate axis. The scope orientation is set in the following way:

- x-axis direction is kept as much as possible (old x-axis is projected to plane orthogonal to extrusion direction)
- y-axis along the extrusion direction
- z-axis normal to the two above

The scope's sizes are adjusted to tighly fit the extruded geometry.

If *height* is < 0, the scope.sy attribute will be < 0.

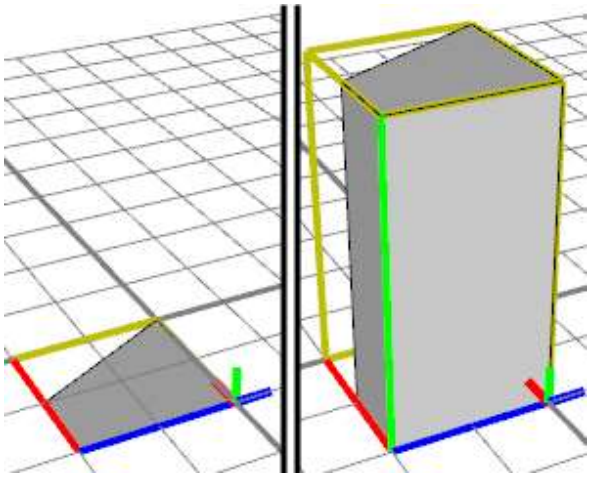
Related

- envelope operation
- offset operation
- roofGable operation
- roofHip operation
- roofPyramid operation
- roofShed operation
- taper operation

Examples

Lot Extrusion

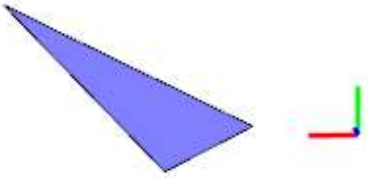
```
Lot-->
   extrude(4) Building
```



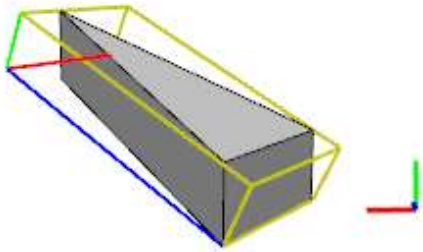
Extruding a building lot. On the left, the lot and the initial scope and pivot are shown; on the right is the extruded building mass model, again with scope and pivot.

Lot Extrusion along a World Coordinate Axis

This building footprint is slanted, e.g. lies on a hill.

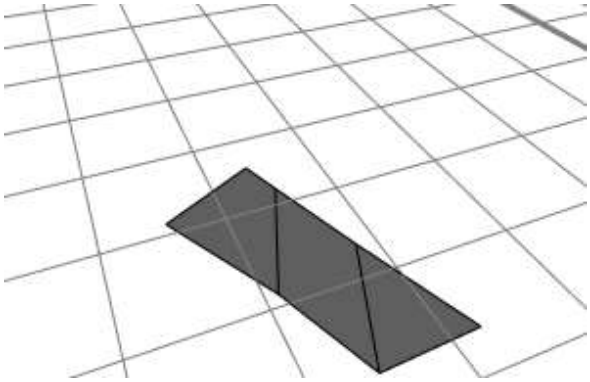


```
Lot-->
   extrude(world.y, 30)
```

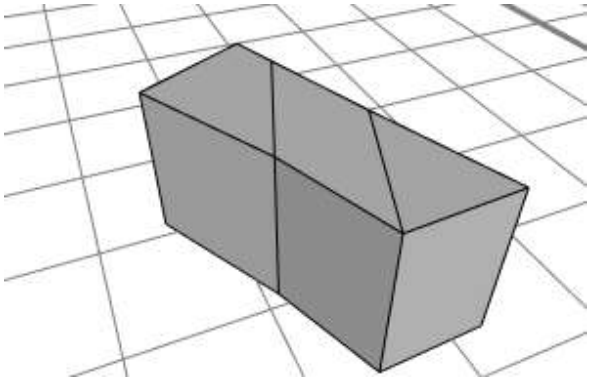


By extruding along the world coordinate system's y-axis, a mass model with upright sides is produced.

Extrusion of Multi-Face Initial Shapes



On the right, an initial shape consisting of 3 faces is shown..



```
Lot-->
   extrude(12)
```

The extrude operation extrudes all faces and combines the results. No internal lamina faces are created.