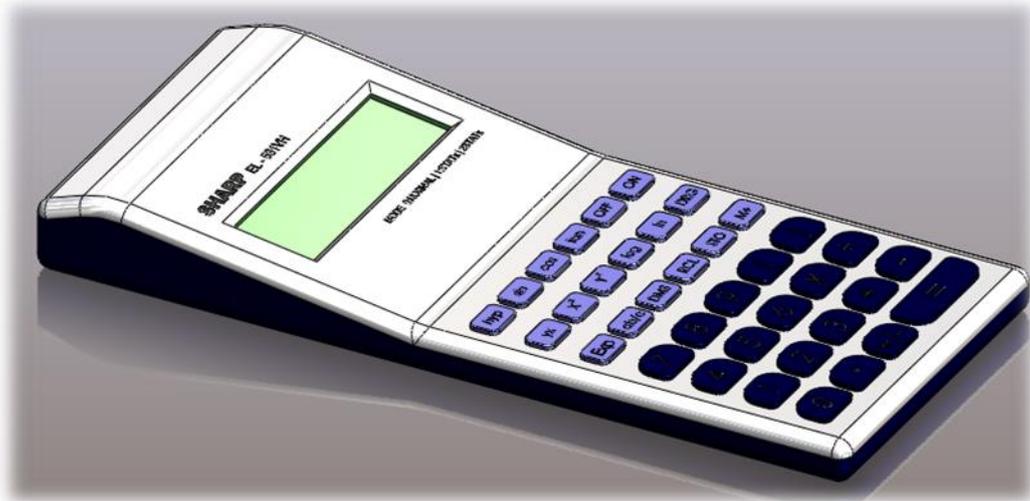


Calculator Exercise

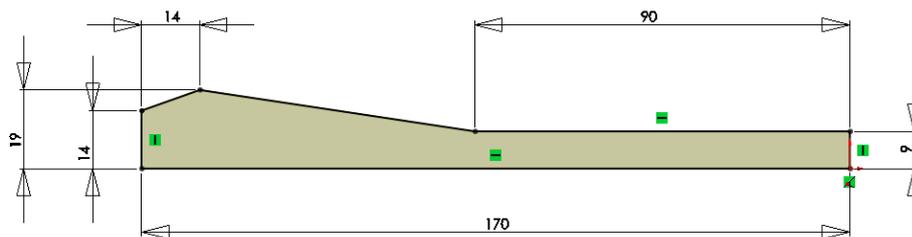


Commands Used

This lesson includes **Sketching (including Text)**, *Extruded Boss/Base*, *Extruded Cut*, *Fillet*, *Chamfer* and *Linear Pattern*.

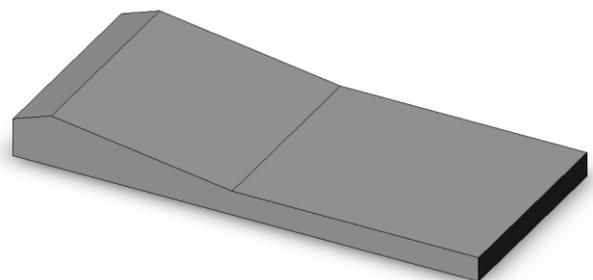
Getting Started

Create a sketch, on the front plane using the dimensions shown. Position the sketch such that the origin is in the lower right hand corner.



Extruded Boss/Base

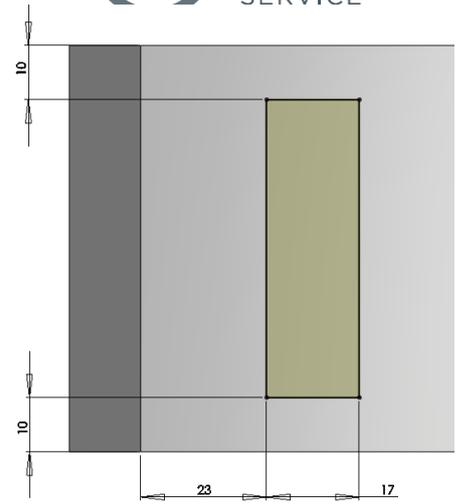
Extrude the sketch using the **Blind End Condition** and a **Depth of 75mm**



Extruded Cut

Sketch the rectangle on the sloping surface and **Smart Dimension** as shown.

Extrude Cut the sketched rectangle to a depth of **2.5mm**.



Adding the buttons

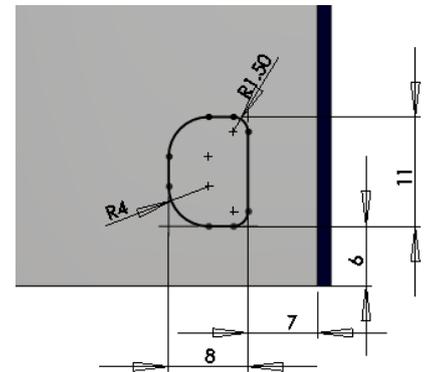
Create a rectangular sketch on the top face.

Smart Dimension as shown.

Create a **Sketch Fillet** on the corners of **R4mm** and **R1.5mm**.

Extrude the sketch to a **Depth of 1mm**.

Create a **Fillet of 0.15mm** on the top edge of the button.

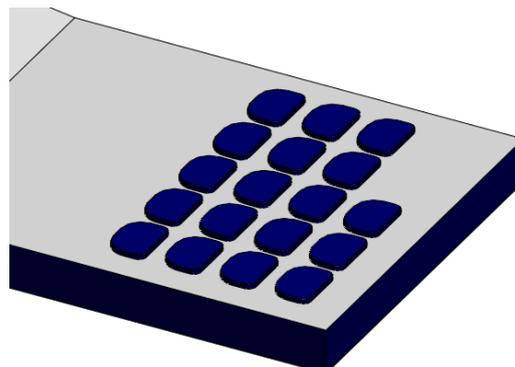
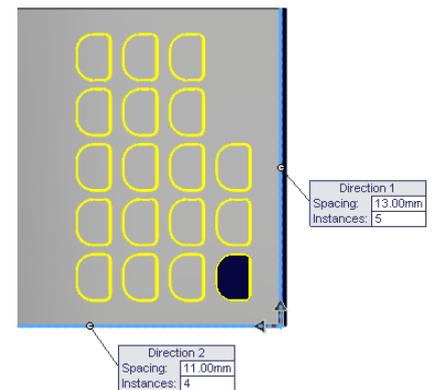


Linear Patterning

Create a **Linear Pattern** using the settings shown.



The fillet must be selected independently of the button feature, in **features to pattern**, to create the linear pattern



Function Buttons

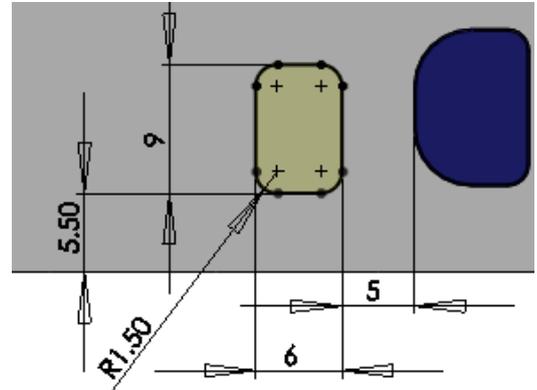
Create the sketch of the function buttons using the sketch dimensions below.

Extrude Boss/Base

Extrude the sketch to a **Depth of 1mm**

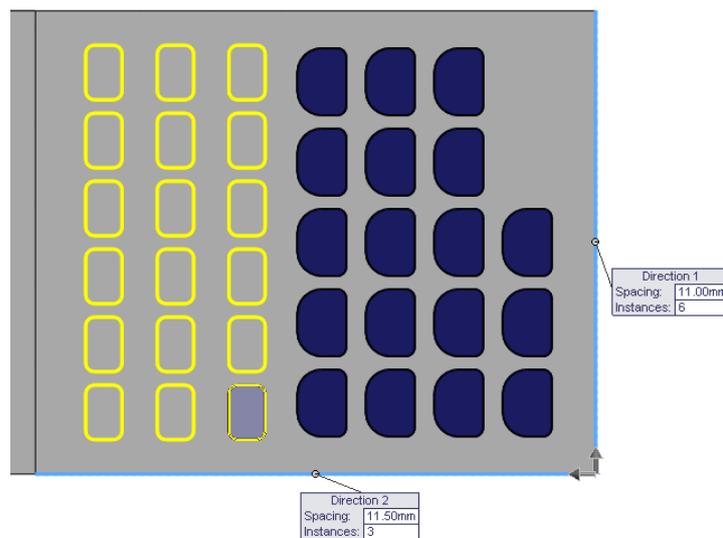
Fillet

Add a **Fillet of 0.2mm** to the top face of the feature



Linear Patterning

Create a **Linear Pattern** using the settings shown.



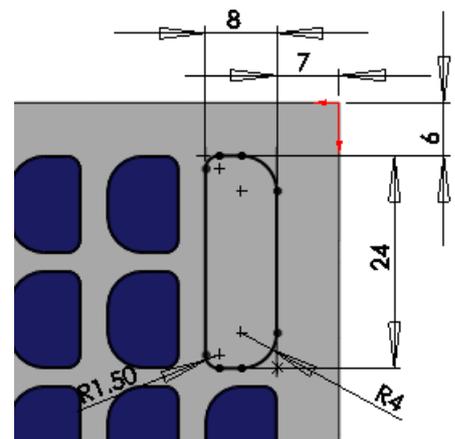
Creating the '=' Button

Create the sketch as shown.

Add a Collinear Relation between the lines and the existing features to fully define the sketch.

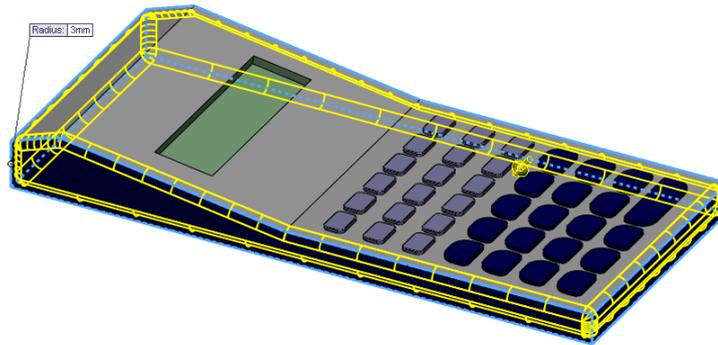
Extrude the sketch to a **Depth of 1mm**.

Add a **Fillet of 0.2mm** as before.

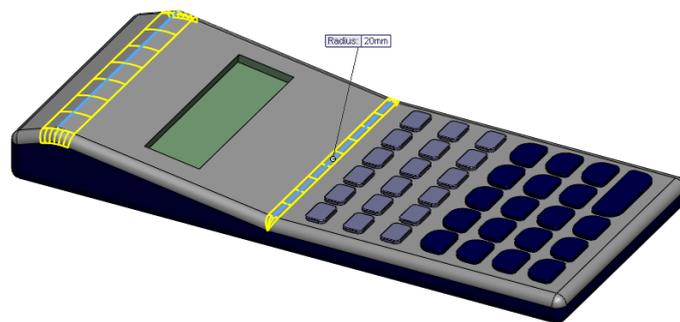


Main Body Fillet

Add a 3mm fillet to the edges shown below. Note the omitted edges.

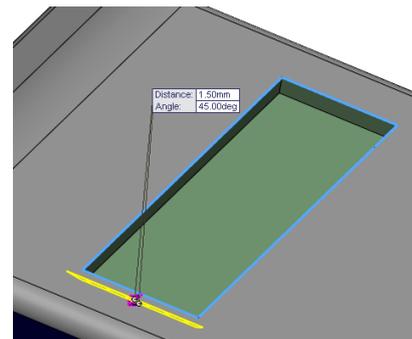


Add a 20mm fillet to the remaining two edges at the intersection of the top faces.



Screen Chamfer

Create a **1.5mm x 45° Chamfer** to the screen edge as shown.



Text

Add **Text** to the lower buttons as shown.

Cut Extrude the sketch to a **depth of 0.2mm**



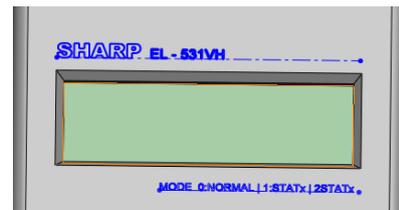
Add the **Text** to the upper buttons as before.

Cut Extrude the sketch to a **depth** of **0.2mm**



Create a sketch on the sloping face and add the text shown.

Extrude Cut the text to a depth of **0.1mm**



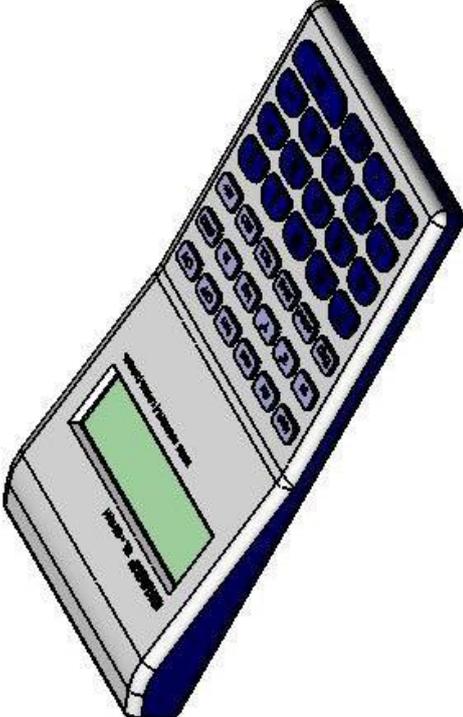
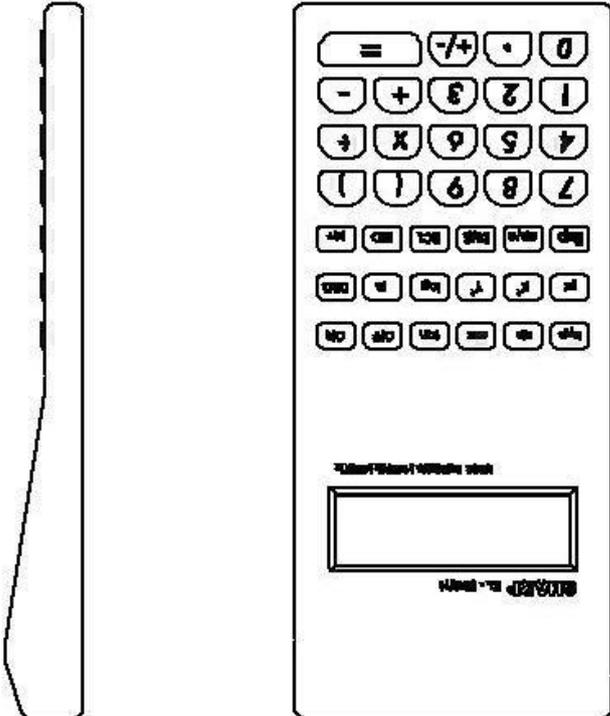
Completed Model

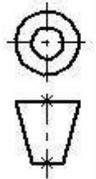


Edit Colours and Textures

Edit the colour and texture settings to make the model look more realistic, as shown on the front page of the document.

Lesson Complete!

DESIGN & COMMUNICATION GRAPHICS	TITLE: calculator		BY: 1.1
	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm		DATE: 28/08/2007
DRAWN BY: VOIT NGUYEN HUU			SCALE: 1:1