Nintendo Wii Controller
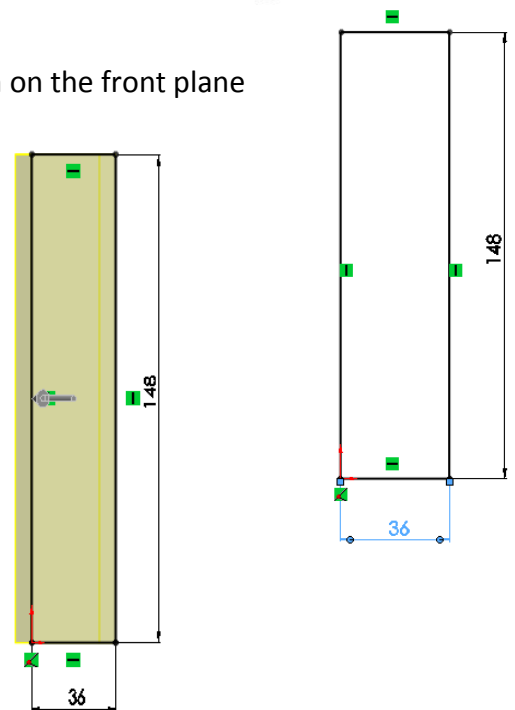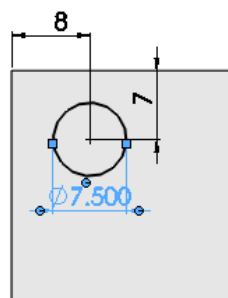
- Since we're starting with the elevation, we open a sketch on the front plane and sketch the outline.

- We can now extrude this sketch out a distance of 7mm.

- The next step is to create the on/off button on the front surface of the sketch. Open the correct plane and sketch this view.

- This is an extrude cut with a taper so we must alter the parameters of our cut as shown in the dialog box by selecting the draft button.
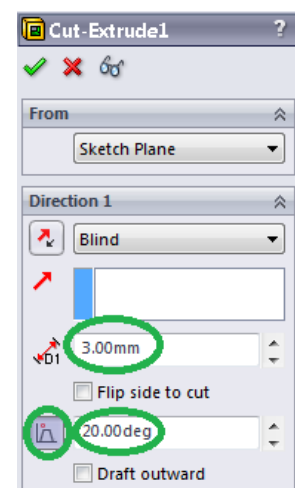
- The next step is to create the actual button. Open a sketch on the newly extruded plane and extrude the button up a height of 3mm.
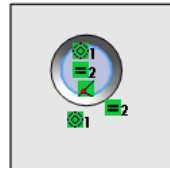

- Create a fillet of 0.2mm on the edge of the button.

- The final step is to construct the symbol on the button to show what it does, open a sketch on the top of the button and sketch the given image.
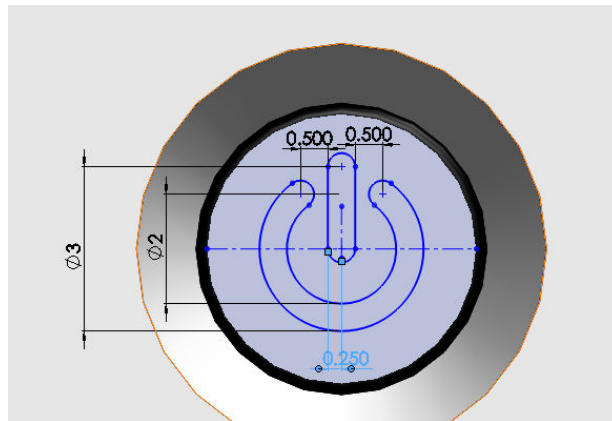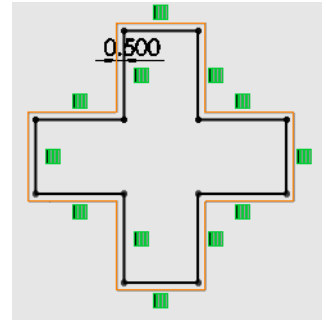

- Use the split line feature to split both the surfaces.

- Open a sketch on the front surface of the controller and create the word POWER under the on/off button. Extrude it out 0.1mm.

- Open another sketch on the front surface and create the following sketch and extrude cut it by a depth of 2mm.
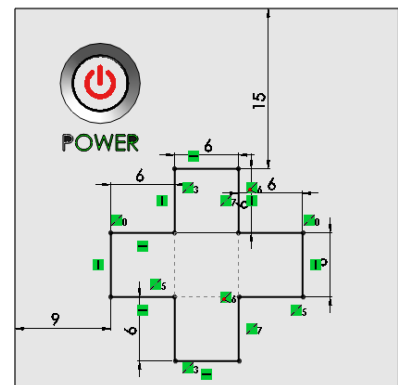
- Open a sketch on this new surface and create a sketch of the following image.
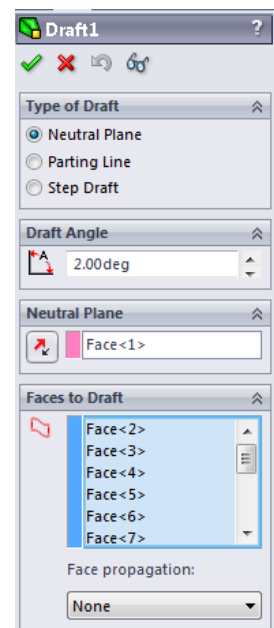
- Extrude this new shape out 4.5 mm.

- The next step is to create a draft on the side faces of this button.

 Draft is found under the feature tab.

- Select draft and then set the draft angle to 2 degrees. Select the top face of the button as the neutral face and all the side faces as the faces that we want to see a draft angle on.

- Select the green tick and you have completed a draft angle.

- Now we need to create a negative dome on the button. This is done by reversing the direction of the dome. This button is hi-lighted in the dialog box.
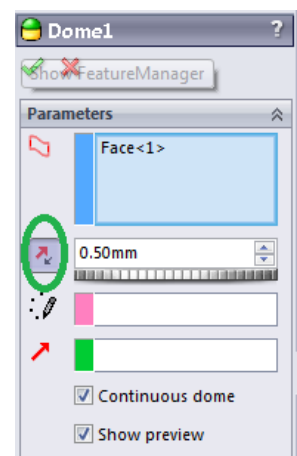
- The next step is to create a fillet of 0.4mm on all corners and edges of the button.

- Now we need to input the final detail on this button. Open a sketch on the front surface of the controller and create the given sketch as we can't sketch on a domed surface.
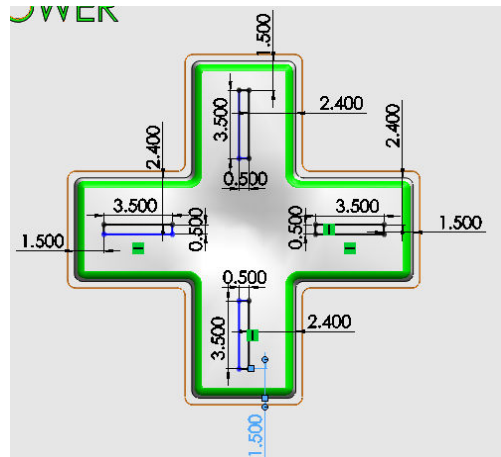
- Extrude the sketch up a distance of 2.6mm.

- Open another sketch on the front plane and dimension as shown.
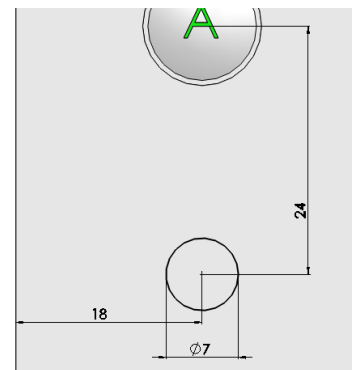
  Measure down 12.75 from the end of the previous button for

  the centre of this one.
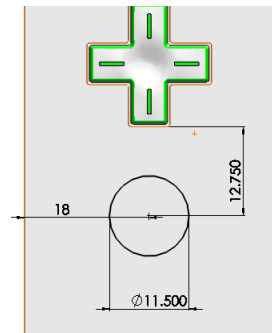
  Extrude cut it 2mm.

  Open a new sketch on the newly created surface and sketch a circle 0.5mm smaller in radius that the previous circle. Extrude this circle up 3.5mm and place a dome of 0.5mm on top.

  Open another new sketch and place the letter A in the centre of this button. Extrude this up 2mm.

- Open a new sketch on the front surface and dimension it as shown.

  Extrude cut this new sketch 2mm with a draft angle of 20 degrees.

  Open a sketch on the new surface and create a circle of identical size
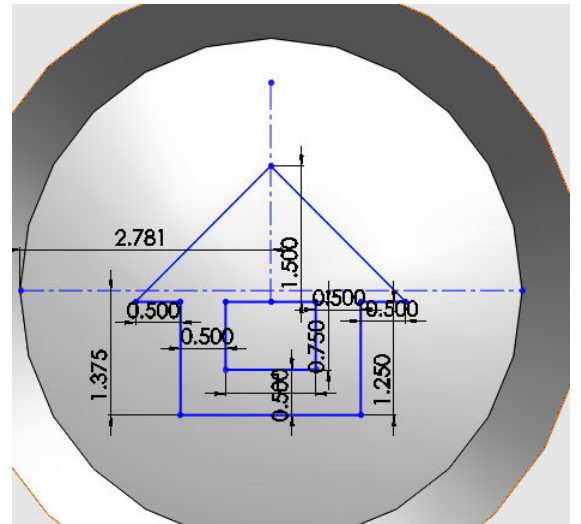
  to the base of the cut.

Extrude this circle up 2mm.

Create a dome of 0.5mm on top of this button.
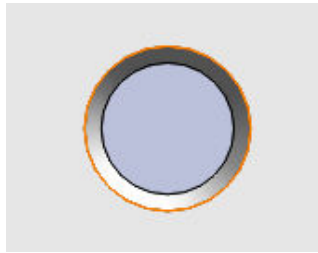
- Open a sketch on the front surface and sketch the image of a house like shown.

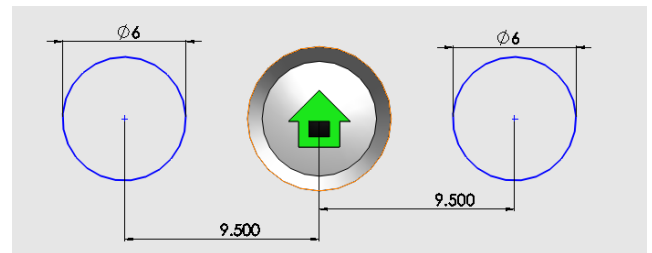 Use centrelines if necessary.

- Extrude this sketch up 0.5mm.
- Create a sketch on the front plane as shown.

  Extrude cut 2mm.

  Create a new sketch on the inner surface, create a circle 0.250mm smaller than the original circle.
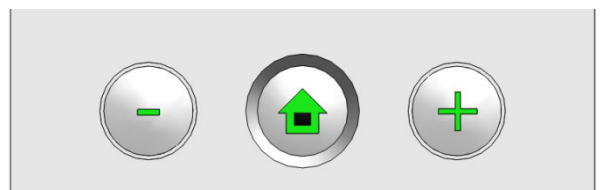
  Extrude upward by 3mm.

  Dome 0.5mm.

- Open a new sketch on the same plane and position the – and + symbols on the buttons.
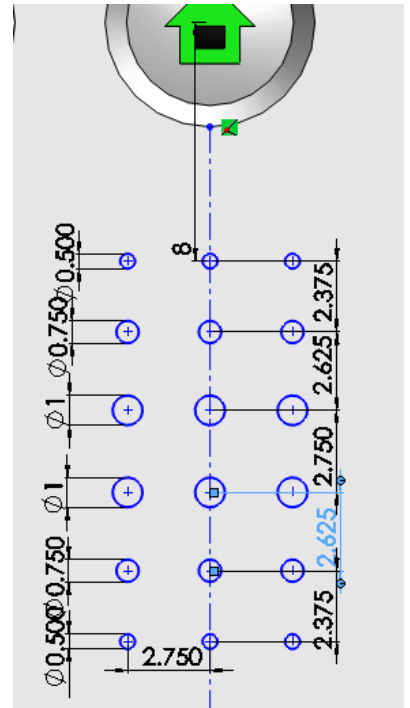
  Extrude upwards1.5mm.

- Open a sketch on the front plane and create the given sketch.

  HINT: Link values

- Extrude cut the different circles to a depth of 2mm.

- Open another sketch and position the word HOME under the button with the house on it. Extrude boss/base 0.1mm.
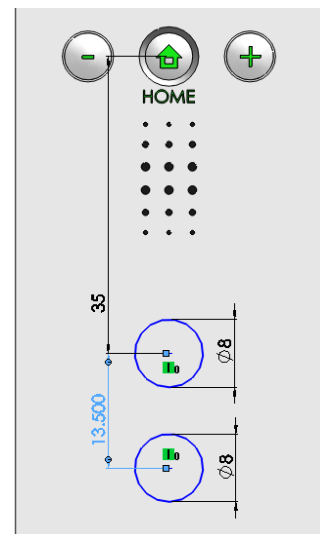
- Open a sketch on the front plane and dimension the two buttons as shown.

  Extrude cut 0.1mm

  Open a new sketch on the newly created surface and sketch a circle 0.25mm smaller in radius than the initial sketch.
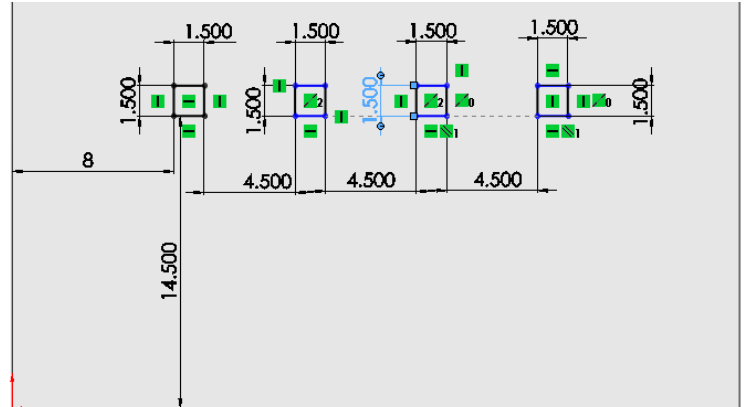
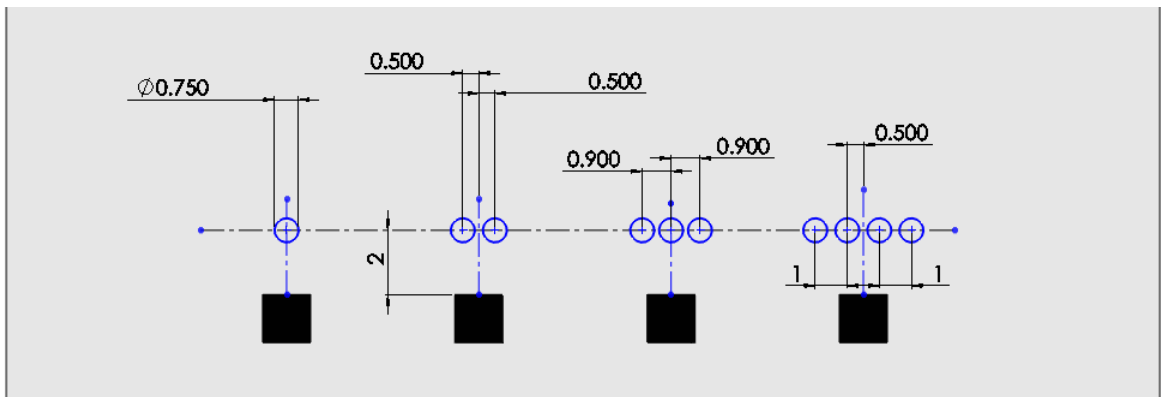 Extrude both circles up 2mm and create a positive dome of 0.5mm on top.

- Add the letters 1 and 2 to these buttons as shown. Open a sketch on the front plane, input the number and extrude up 2.4mm.

- The next step is to create a sketch on the front plane and dimension it as shown.
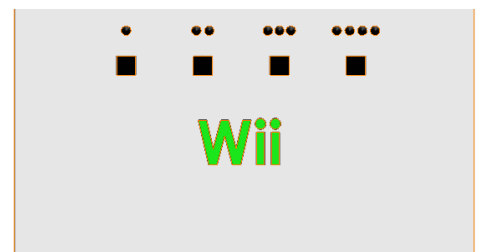 Extrude cut these squares by a depth of 0.1mm.

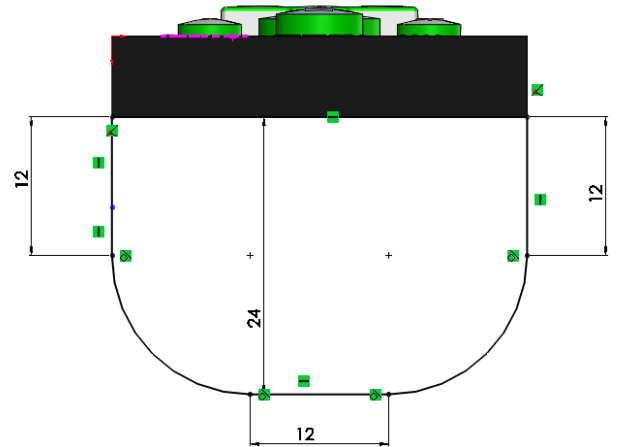- The next step is to sketch a series of dots as shown.

- Use split line to separate these dots from the main body and then create a dome of 0.1mm on top of these circles.
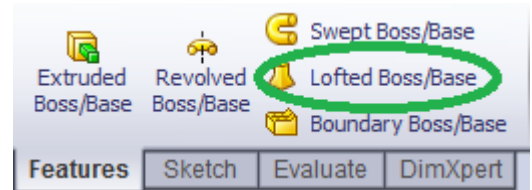
- Place text underneath the extruded squares saying Wii.
- Open a sketch on the top plane and dimension it as shown.

- Create the given sketch and extrude this surface up along the main body 93mm.

- The front of the Wii controller has curved and various contours which we must represent. This can be done by using the loft icon which is found in features.

- The first step is to create a series of planes where we wish to position the desired curve upon. Each of these planes represents the actual shape of the curve and a certain point.

- We will use four planes as shown to loft this particular surface.
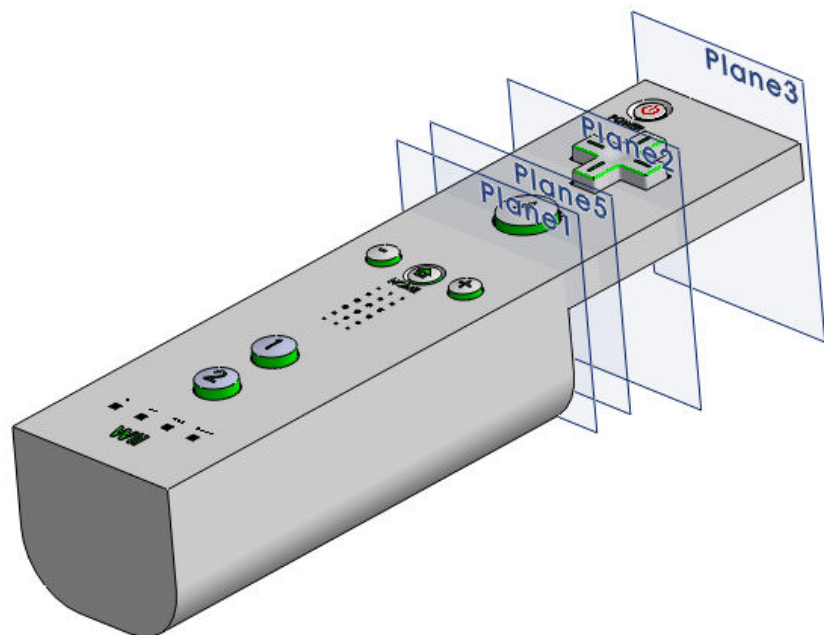
- We can create these planes by opening a sketch on the top plane and hovering over the edge of the plane until a symbol with 4 arrows appear. Click and hold down on the mouse while holding the CTRL key on the keyboard. Drag the cursor away from the plane and once the original top plane goes pink, a text box should open asking for the dimension of the new plane.

- Create a new plane using the top plane as your stating plane.

 Input parameters as shown in the dialog box displayed.

 Select the green tick to complete the plane.
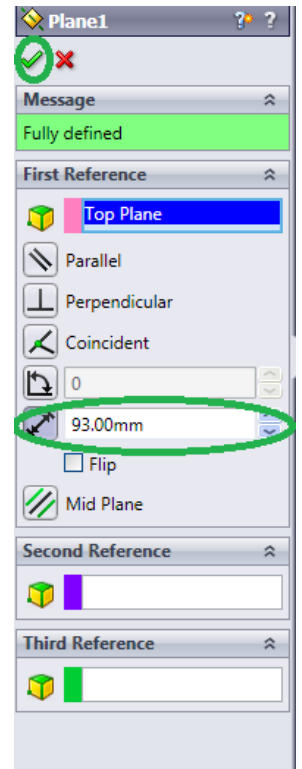
- Open a sketch on this new plane "Plane1" and sketch the outline of the original surface.

- Use Plane1 as your start point, click and drag to create Plane2 which Is located 7.8mm away from Plane1.

- Open a sketch on plane 2 and dimension it as shown.
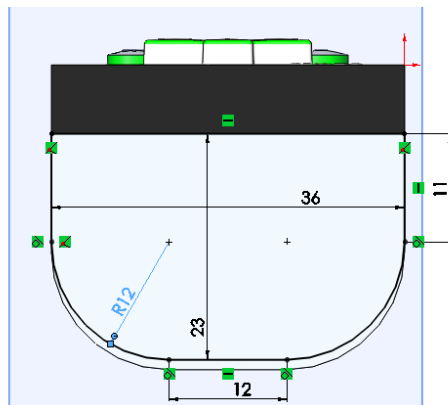
- Create Plane3, 26mm away from Plane1 and open a sketch on it as shown. Use the ellipse icon on the sketch tab to create the desired curve.
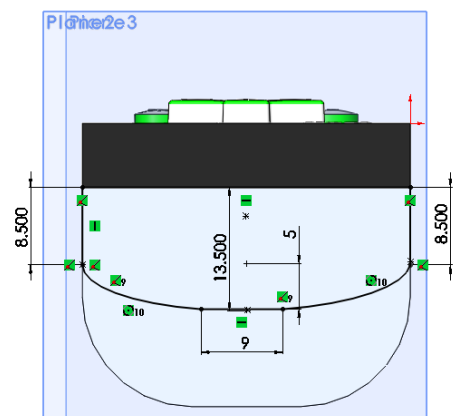
- Create Plane4, 29mm away from Plane1 and create a sketch on it as shown.
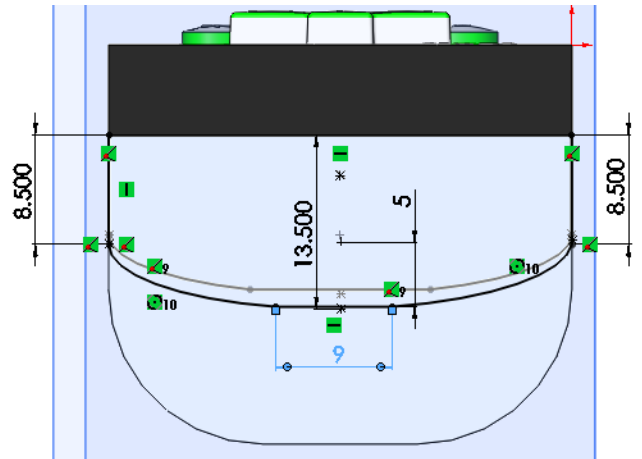
- Now that we have the 4 sketches created, we can produce a loft between the 4 planes to produce the desired shape.

- Select the loft tool and select the same point on each sketch as displayed in the picture by the green dots.
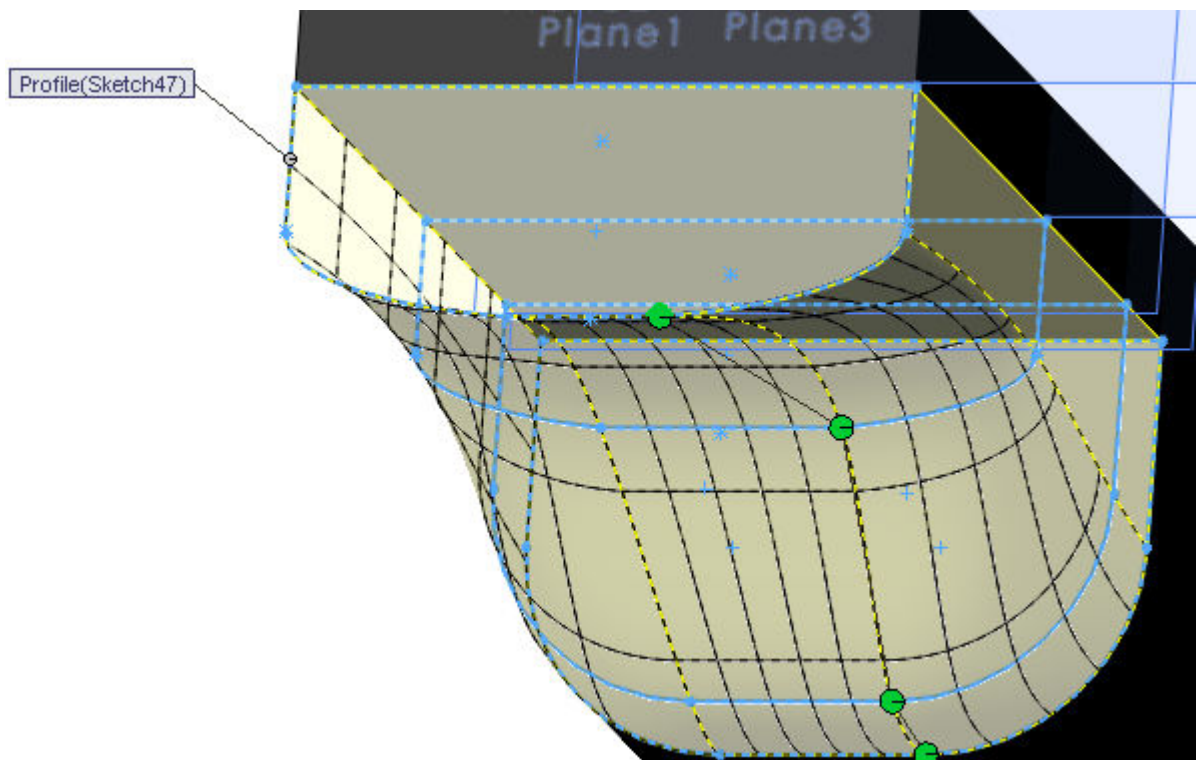
- Now that we have created the main structure, we add the minor details to help enhance the appearance of the controller.


- Firstly we can fillet the back corners of the controller.

- We use a different type of fillet for this.

- Select the fillet icon and select face fillet in the dialog box.
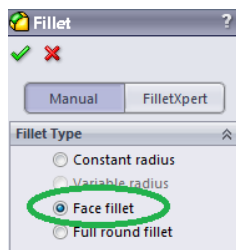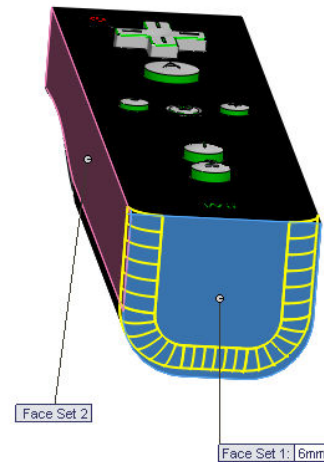
- Select face set 1 as shown in the top right-hand corner, and select all the faces that intersect face 1 where we want a fillet to appear. Set parameters as shown.
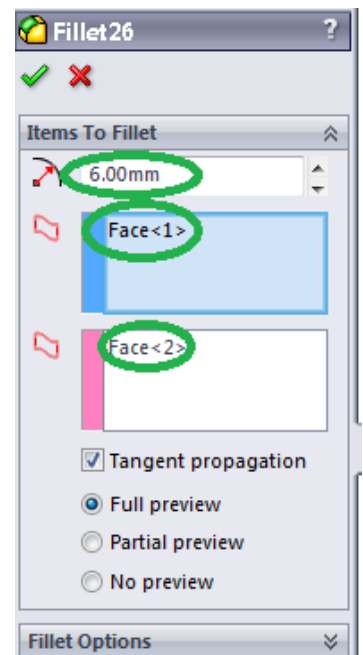
- Open a sketch on the front plane and dimension it as shown. The circles are diameter 12mm.
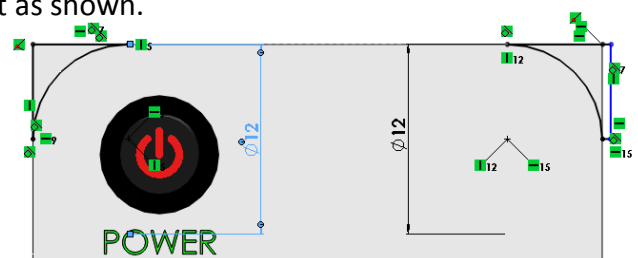
Extrude cut these corners altogether. This is another method of creating a fillet.

- Looking directly at the front surface/elevation, we want to create a standard fillet of 2mm on all the edges.
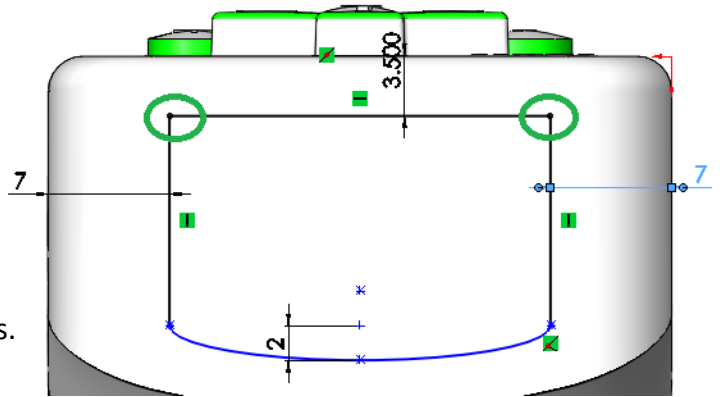
- The next step is to create the screen on the front of the controller.

  The screen dimensions are as shown.

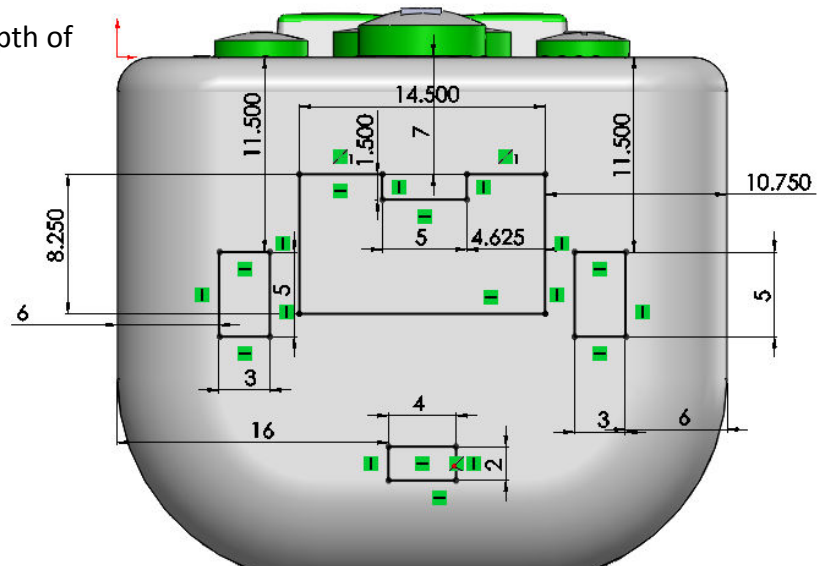 Use the ellipse tool for the curve

  Extrude cut the surface 0.1mm.

  Create a fillet of 2mm on the top corners.

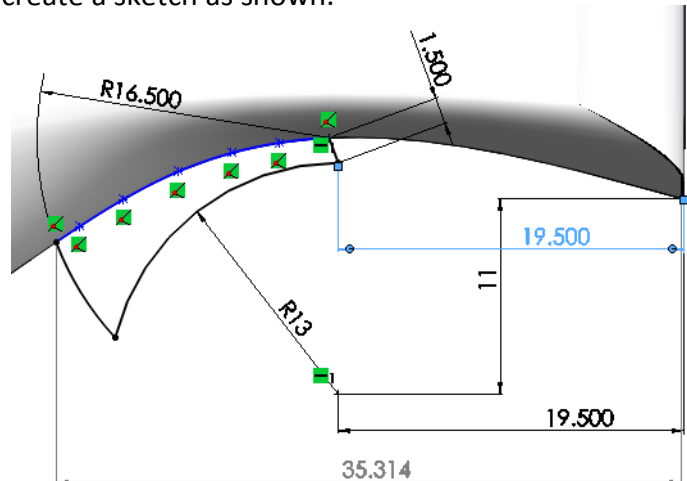- Open a sketch on the top plane and dimension it as shown. Extrude cut this sketch by a depth of 10mm.

- Now we must create our final new plane in order to locate the trigger button underneath.

- Open a sketch on the end plane and drag out a new plane from this original plane. Ensure that the planes are 18mm apart.
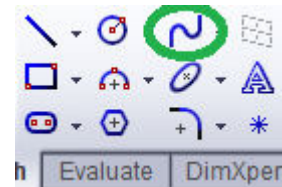
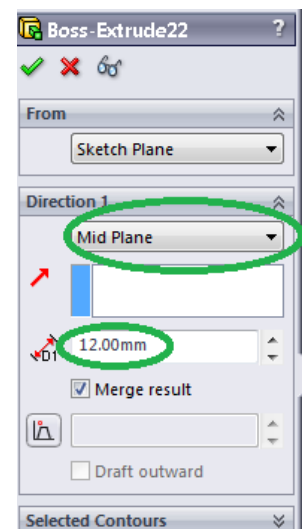- Open a sketch on this new plane and create a sketch as shown.

- Use the Spline tool to represent the inner blue curve which is located under the sketch tab.

  The spline tool can be used to outline a curve as displayed.

  If you click on the little dots that appear along the line, you can vary the curve to suit. It is also used to create random curves.

- Now that we've outlined the trigger, we can extrude it using the extrude boss/base tool. We must select mid-plane to extrude the trigger as we created our sketch in the centre of the object. Set the parameters as shown.
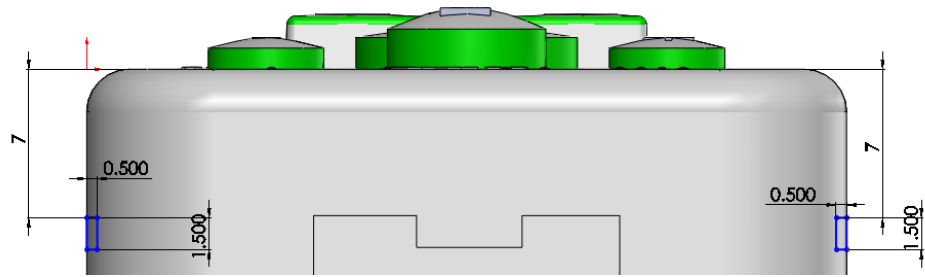
- We can now fillet all the edges of the trigger using a 1mm fillet.

- Open a sketch on the bottom surface of the front plane and create a sketch as shown.

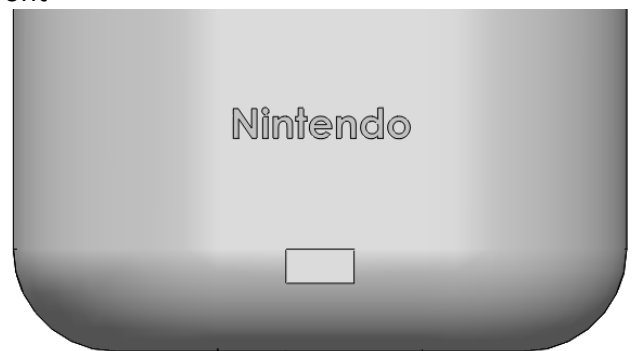 Extrude cut this sketch by a depth of 4 mm.
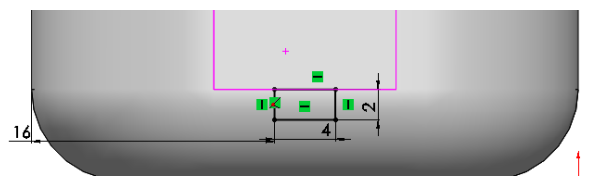
- Open a sketch on the top plane and create a sketch as shown.

- Extrude cut these sketches by a depth of 100mm.

- Open a sketch on the bottom surface of the front

  plane and using the 'A' icon under the sketch

  tab create the image below. Extrude cut the

  text by a depth of 1 mm.

- Create a straight slot of 24mm which surrounds the Nintendo text. Create a second slot
  which is 0.25mm smaller and extrude cut the centre of this by 1mm.
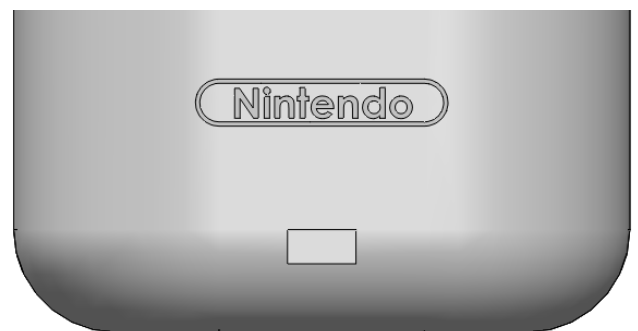
- Alter the colours of the controller to that of your own taste.

- Don't forget to save this part file.

Wii CONTROLLER COMPLETED