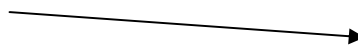**I-Pod**

- Open up SolidWorks as a part file.

  When we observe this object, we see that it has a plan view
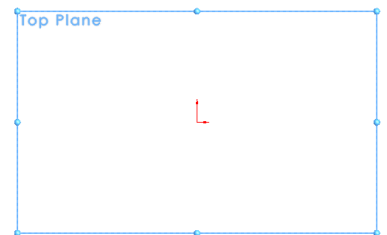
  of an ellipse.

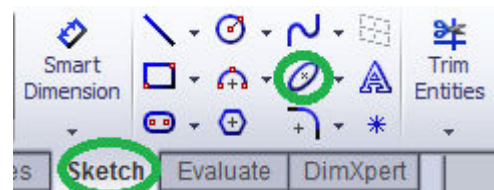- Since it's a plan view, we open a sketch on the top plane.

- You should have a view like this.

  The red symbol in the middle is the origin. It's the point where the

  front plane, top plane and side plane all intersect.

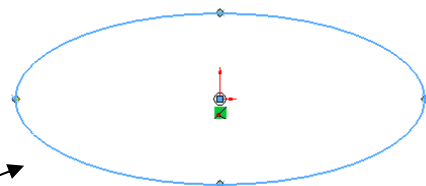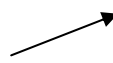- Select the sketch tab and click on the ellipse icon.

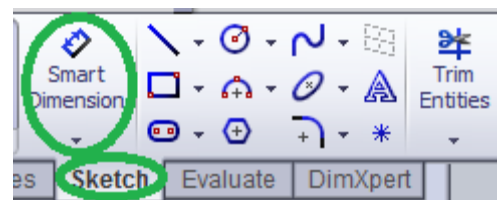- Select the origin with your mouse and drag it out to the left horizontally.

- Click your mouse and then go back to the origin.

  Drag the mouse vertically upwards and click again.

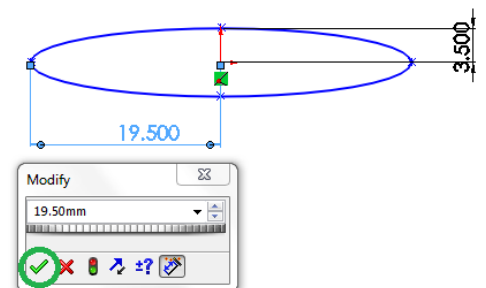 You should have an image similar to the right.

- Now we must dimension the ellipse.

- Select the sketch tab and dimension icon.

- Click on the two points that we want to dimension and then

  drag the mouse away and click again to keep the dimension

  reading out of the sketch.

- Input the correct dimension and click the green tick.

- Correct both dimensions as in the image above.

- Select the Feature tab and the Extrude Boss /Base icon.
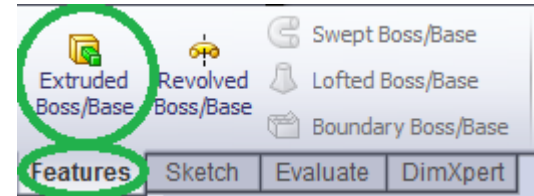
- Select the inside of the ellipse and input the correct distance that we want to extrude in the box that appears in the left column. Alter the position of the ellipse by pressing the arrow keys on the key board to see the extrude.

  Make sure that the arrow is pointing down when extruding the ellipse. If it isn't pointing down, click the icon circled in red to change the direction of the extrude.
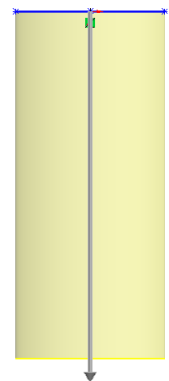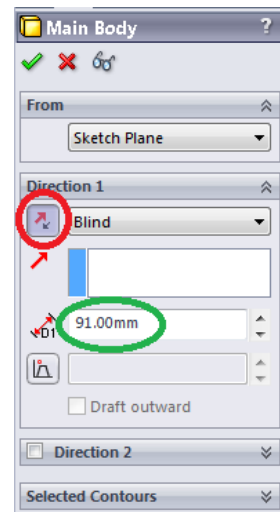
- Click the green tick in the left corner of the extrude dialog box, you've just created the main body.

- Rename this Boss-Extrude by clicking on it with two slow clicks. Call it Main Body and then click away. The Boss-Extrude will be found underneath the reference plane tabs.

- The next step is to draw in the buttons and the screen on the front face.

- We must open a sketch on the front face. Ensure you are looking at the front of the main body by clicking the space bar and clicking front.

- Once we have a sketch open, click the rectangle tool on the sketch tab and click close to the top left corner, drag out the rectangle and click again to complete the rectangle. Sketch another rectangle inside the previous one.

- Sketch two circles which are also found on the sketch tab, below the screen which represents the buttons.

- Dimension the screen and buttons as displayed.
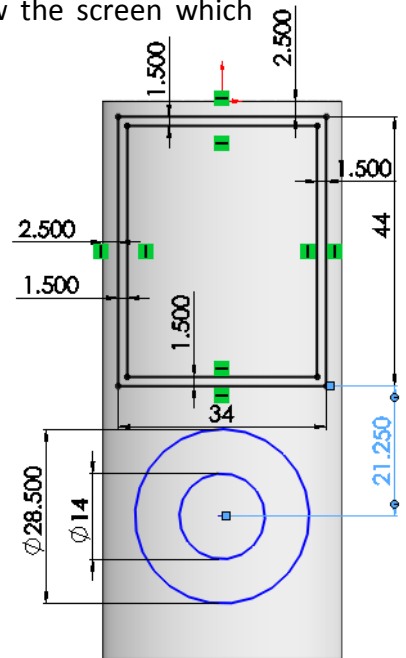
- We now want to transfer these actual lines onto the outer surface of the I-Pod.

- This is done by clicking on the features and then the wrap icon.

- Select the newly created sketch for the source sketch box below by clicking on the actual sketch on the I-pod. Then select the face of the I-Pod and check that scribe is ticked. Click the green tick and now our sketch is on the surface.
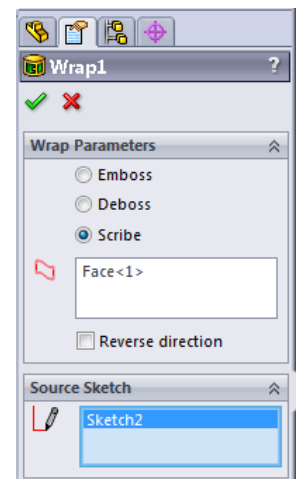
- We must now make a clear distinction between these surfaces, as they are to be painted in different colours. This is done by using a split line tool.

- Hover the mouse over the SolidWorks symbol in the corner and click Insert, Curve and Split Line. Select the screen as your sketch and then click on the plane box lower down and select the face of the I-Pod. Click the green tick and now the buttons and screen are separate entities to the main body.
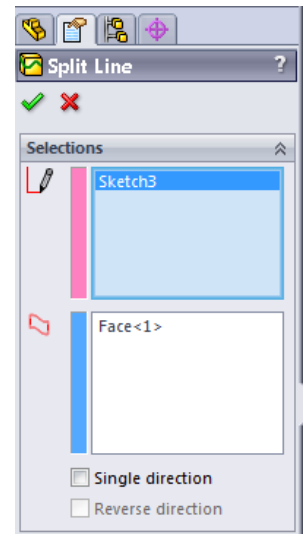
- Using the arrow keys, rotate the I-Pod so as we can see the bottom surface. We now want to create the slots for the connections. This is done by opening a sketch on the surface. Right click the surface and click create new sketch.
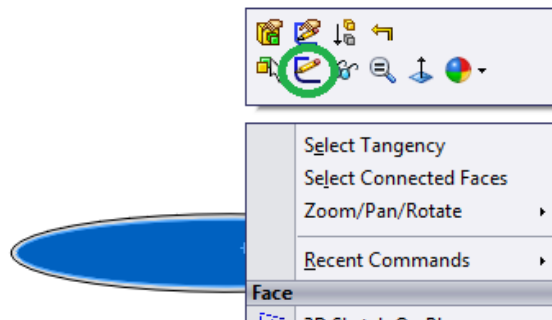
- Using the circle, rectangle and smart dimension tools in the sketch tab. Create and dimension the sketch below.
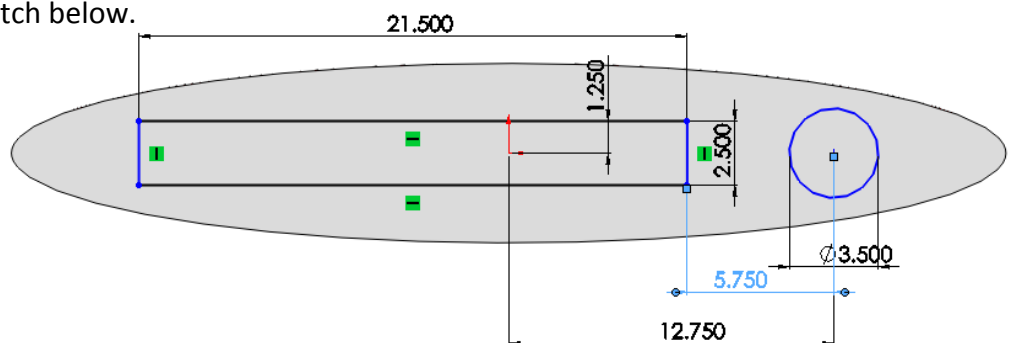
- The next step is to use the extrude cut tool to extract this material. This is found under the feature tab.
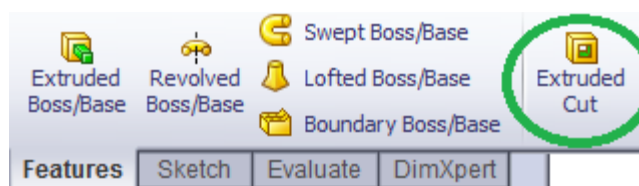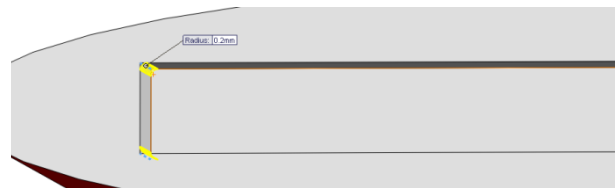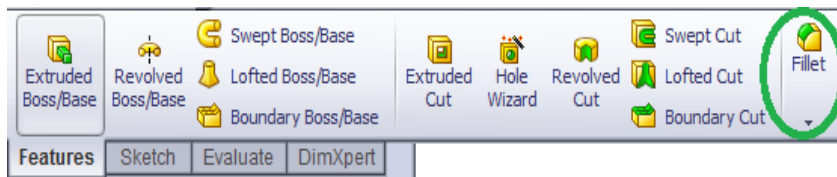
- Select the extruded cut and select the regions to remove.

- Select the depth of the cut and make sure all the parameters are the same as in the text box on the right. Select the green tick.
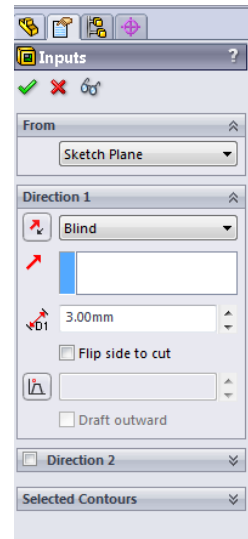
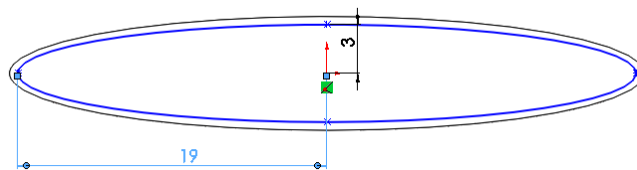- The next step is to create a fillet on the inside of the extruded rectangle.

- The fillet size is 0.2mm and we must select the specific lines that we want to fillet.

- We must now create a fillet on the outer edge of 0.1mm.

- Open up a sketch on the Top Plane and create an ellipse. Dimension it like the one below.

- Use the split line tool as already shown to split this new ellipse from the remainder of the surface. Insert, Curve, Split Line etc.

- Open a new sketch on the top plane and create a straight slot which can be found under the sketch tab. Hover the mouse over the Icons if you can't find it and the name will appear. Dimension the slots as shown.
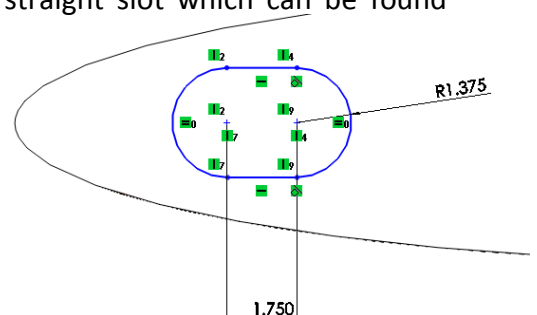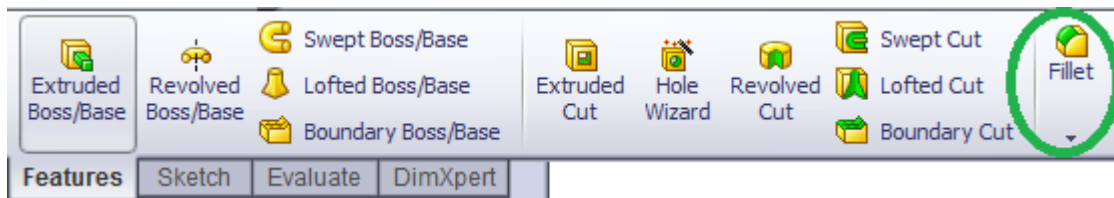
- The next step is to extrude cut this slot with a depth of 1 mm.
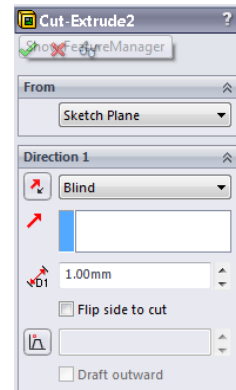
- We must now create a sketch on this newly extruded surface by right clicking on it and opening a new sketch as before. Draw a circle to fit the slot and extrude it up 1.5mm.

- Then create a fillet of 0.1mm on the edge of the button that's just after being created.

- Open a sketch on the front plane and click the A icon under the sketch tab.
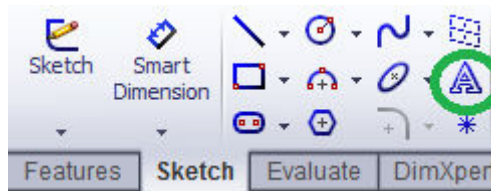
- Type MENU into the text tab and click on the button on the I-Pod to correctly position the text. When you're happy with its position, select the green tick.

- Using the Extrude Boss/Base button select the text and extrude it up a height of 3.6mm as its travelling from the centre of the body.
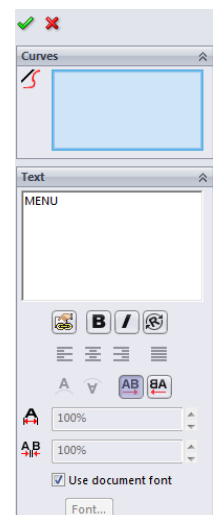
- Using the line icon on the sketch toolbar, create the fast forward, rewind and play/pause images on the buttons. The triangles have an edge of 2mm while the rectangles are 2mm by 0.5mm. Extrude these sketches in order to be visible on the face of the buttons.
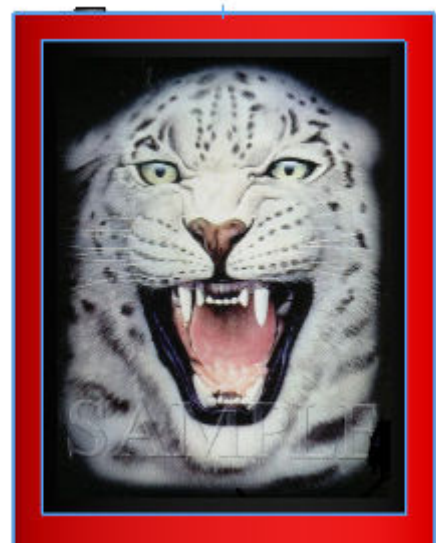

- To change the colour of a surface, right click on the surface and select the coloured ball.
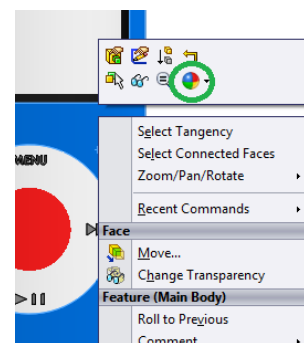

- Select the face and the colour chart should appear. Select your colour and click all the surfaces that you want in this colour. Then click the green tick for the colour to take effect.
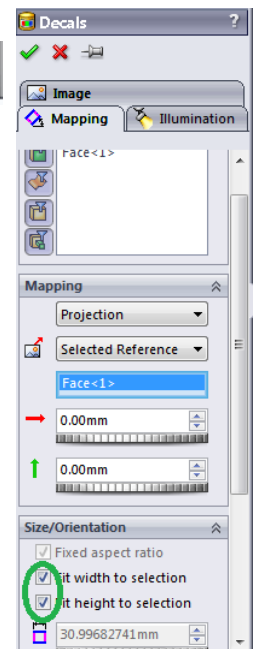

- Adding Decals like the Tiger on the I-Pod.

- Hover your mouse over the SolidWorks in the top left corner, select View, go down to DECALS and turn them on by clicking on them.

- Then go to Tools, Add-ins and Photoworks. (Newer versions of SolidWorks should go to photoview360 instead of photoworks)

- Photoworks will appear in the top toolbar. Open it and select decal.

- Browse for your picture and once you've found it, click on the surface where you want to position it.
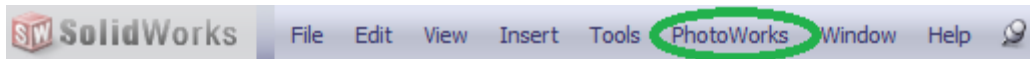
- Select mapping and set the picture to the correct width and height.

- Select the green tick.

- **Save the part file as I-Pod**

I-POD COMPLETED