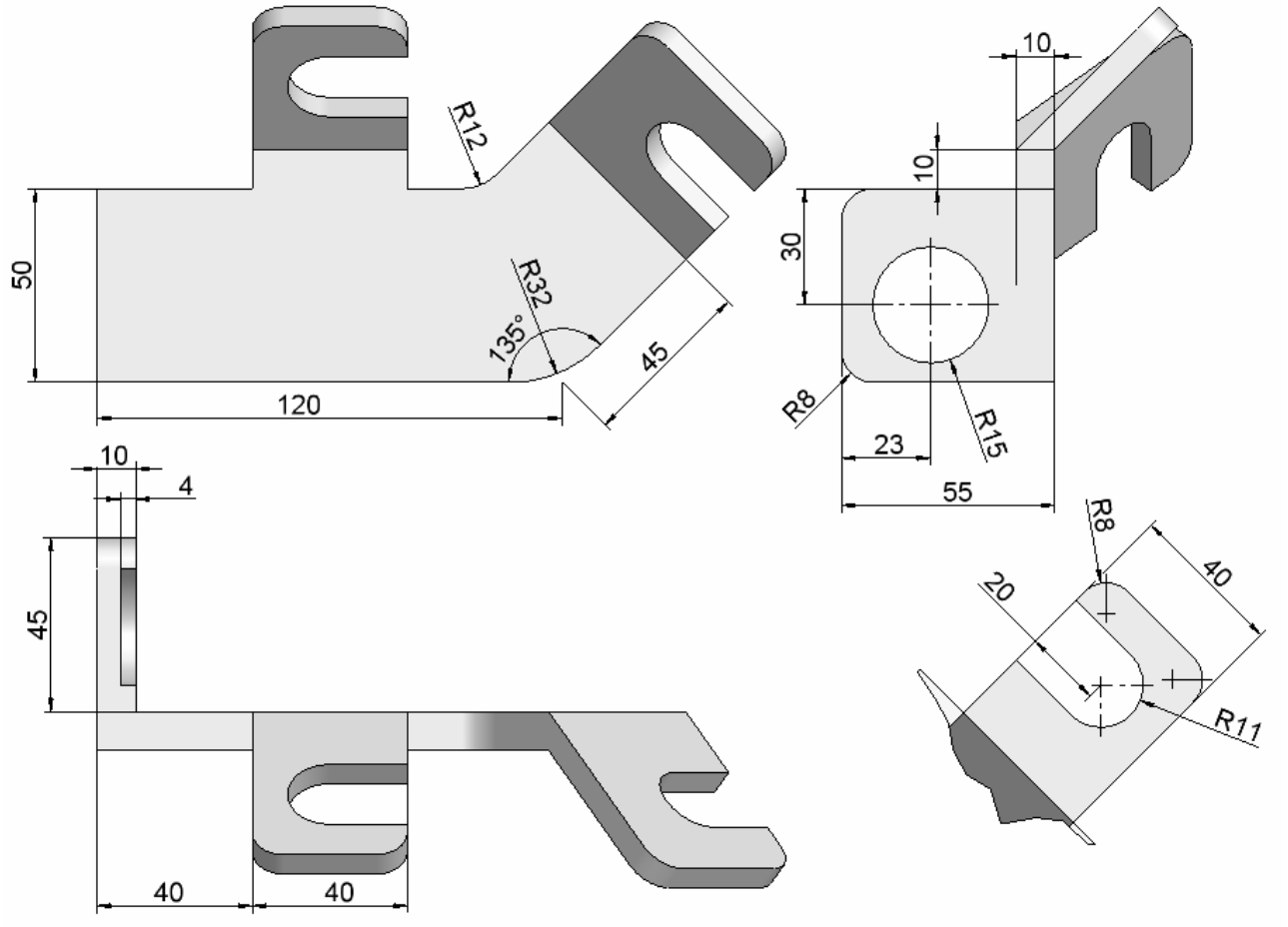
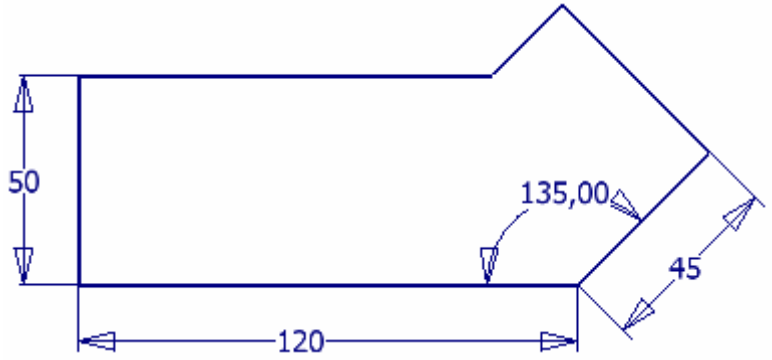
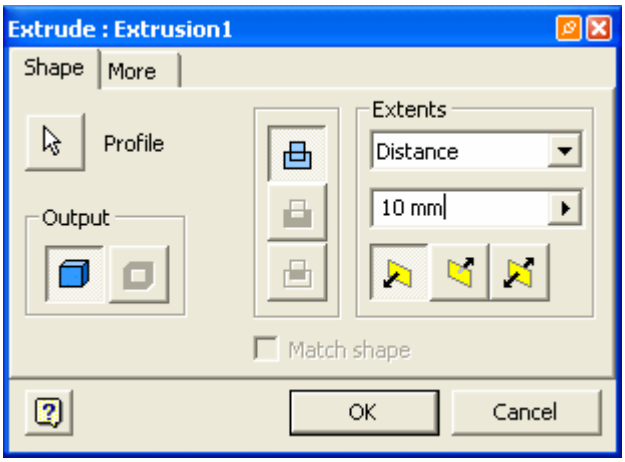
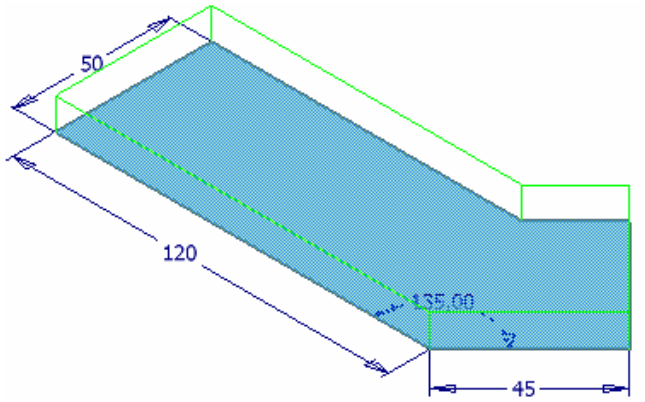


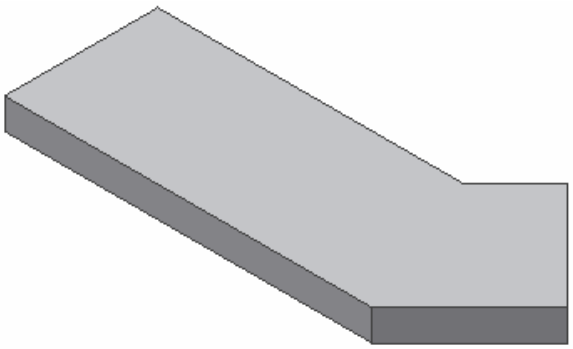
Faça clique em Line L e desenhe o seguinte perfil.



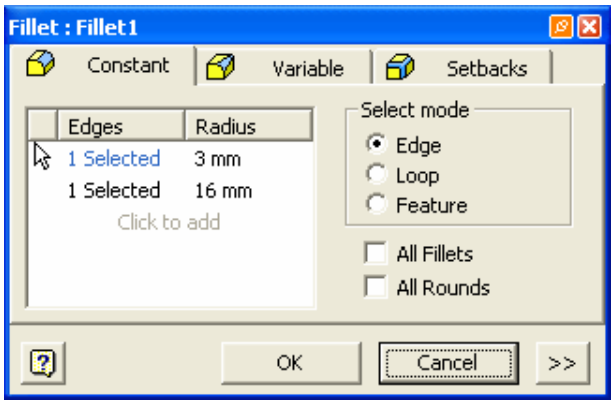
Faça clique em Extrude E ou em **E** para definir uma extrusão de **10mm**.

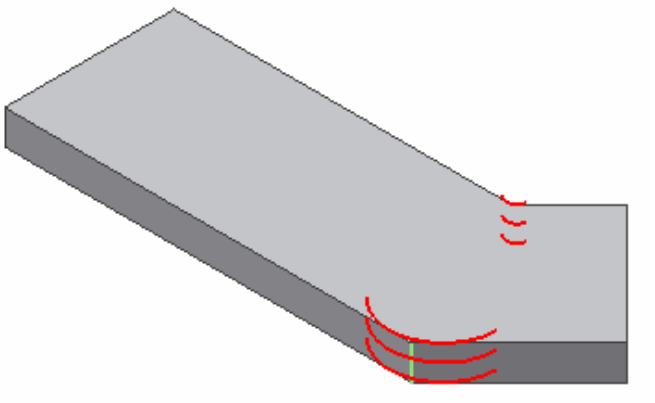


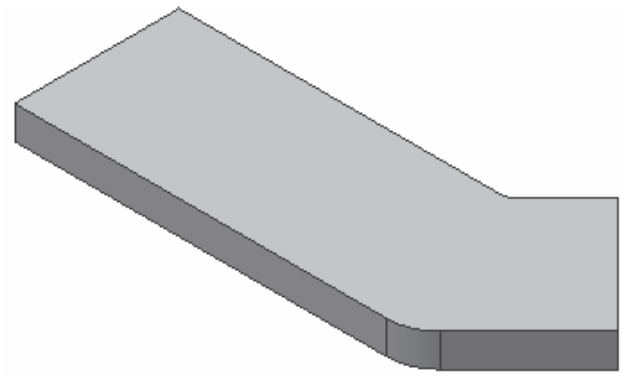




Faça clique em Fillet Shift+F para definir um raio de **3mm** e **16mm** nas arestas indicadas do modelo.

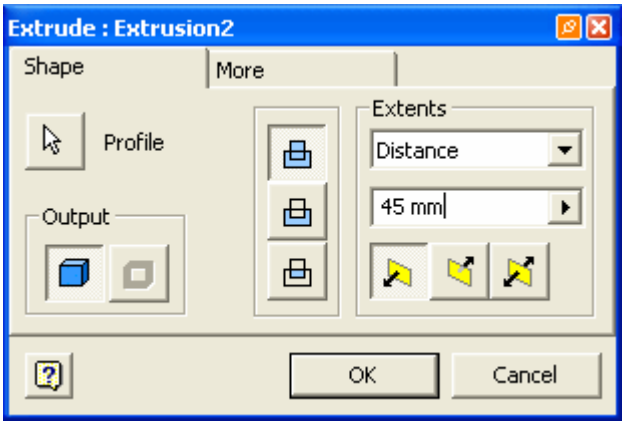


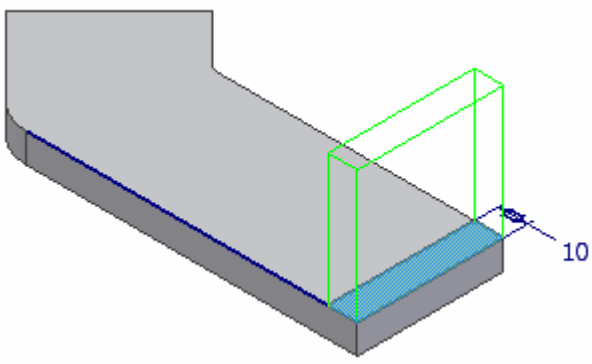


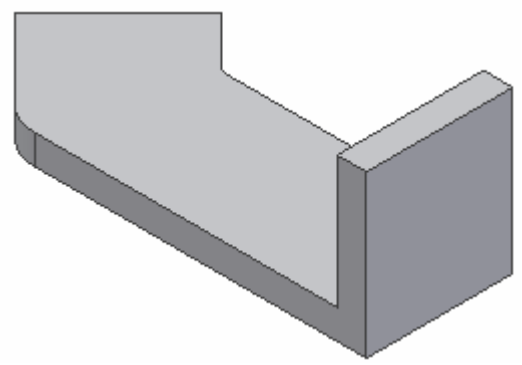


Crie o *Sketch* seguinte.

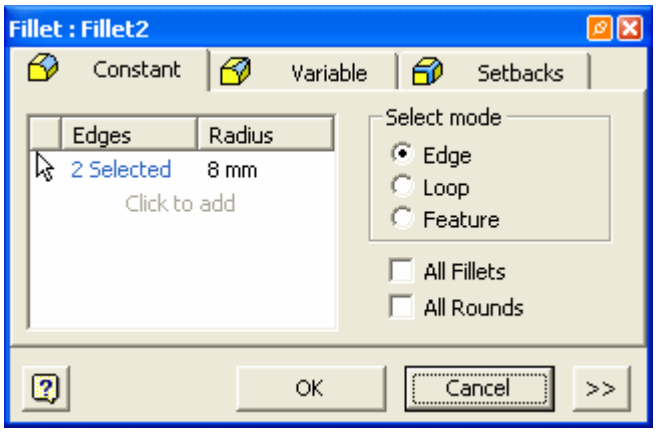
Faça clique em Extrude E ou em **E** para definir uma extrusão de **45mm**.

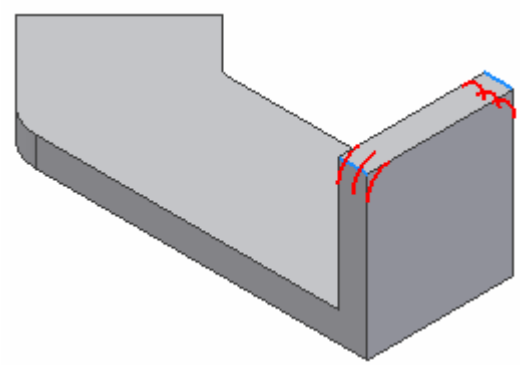


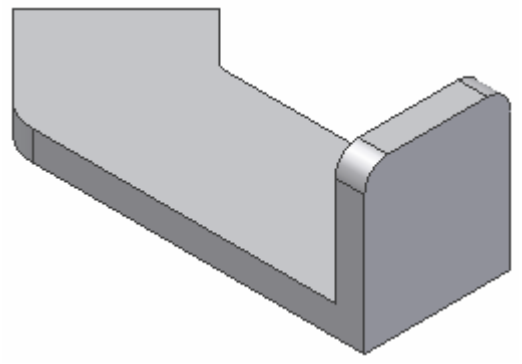




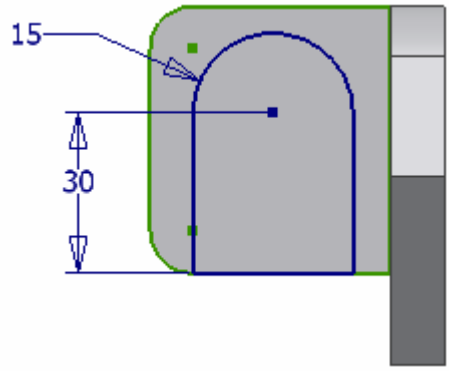
Faça clique em Fillet Shift+F para definir um raio de **8mm** nas arestas indicadas do modelo.



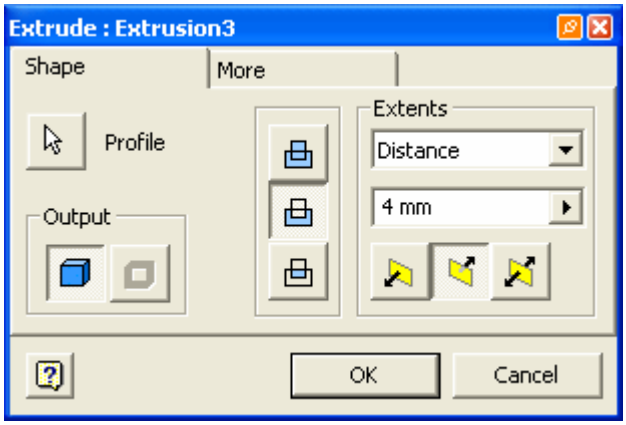


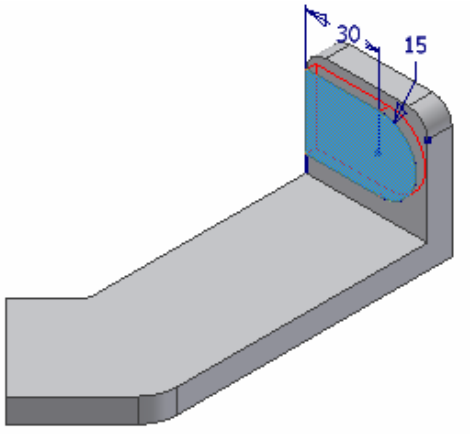


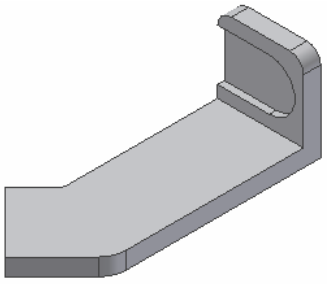
Crie o *Sketch* seguinte.



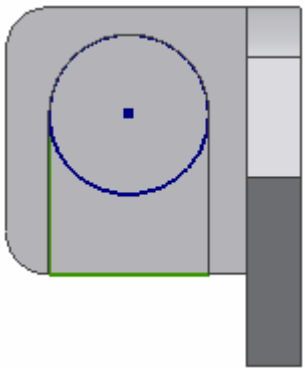
Faça clique em Extrude E para definir uma extrusão em corte. Seleccione a opção e o método *Distance* para um corte de **4mm**.



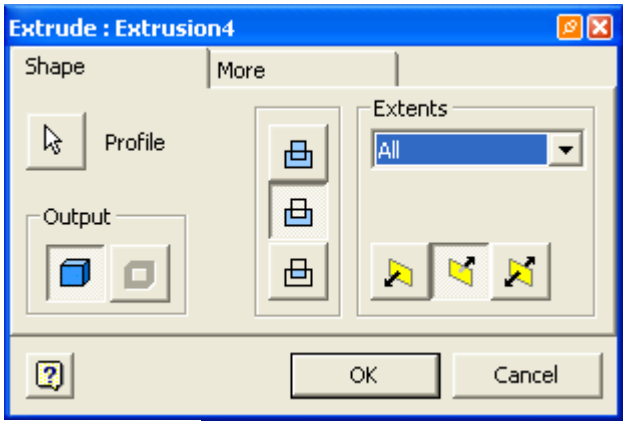


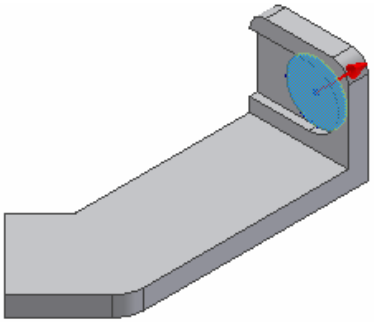


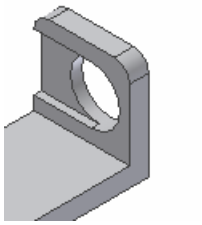
Crie o *Sketch* seguinte.



Faça clique em Extrude E para definir uma extrusão em corte. Seleccione a opção  e o método *All* para o corte cruzar todo o modelo.

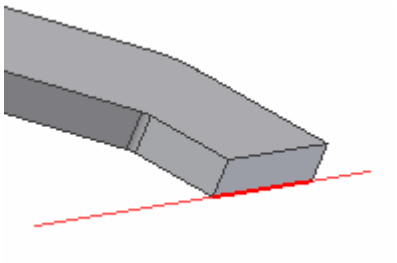


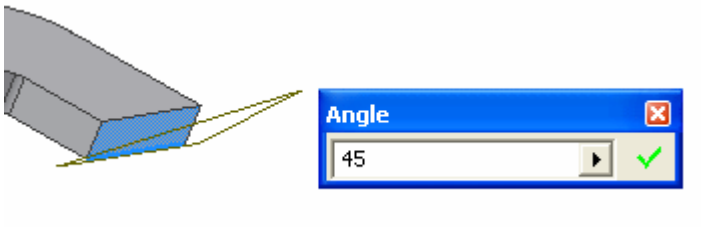


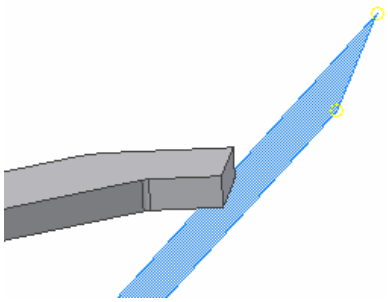


Criar um plano que passe por aresta do modelo e faça um determinado ângulo com uma face do modelo.

Faça clique em Work Plane « para criar um plano. Seleccione a aresta e a face em relação à qual deseja criar um plano paralelo. Defina o valor do ângulo.

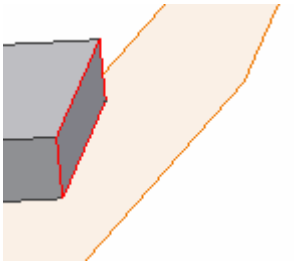


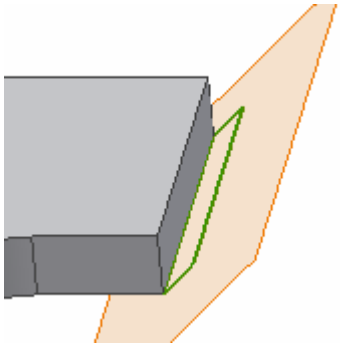




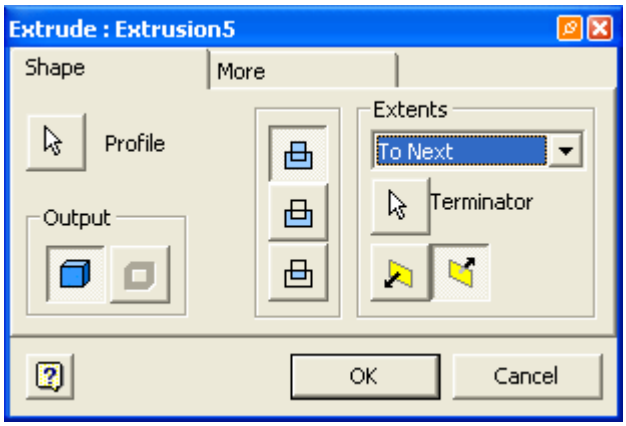
Faça clique em Sketch e seleccione o plano anterior para definir um novo plano de *sketch*.

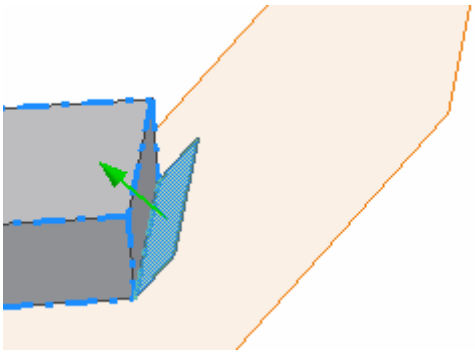
Faça clique em Project Geometry para projectar a face, seleccionada anteriormente, sobre o plano.

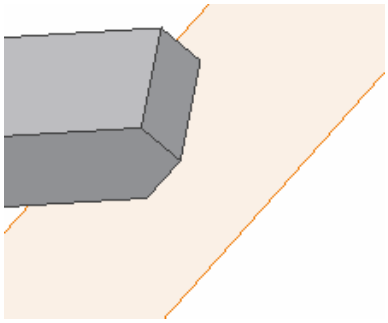




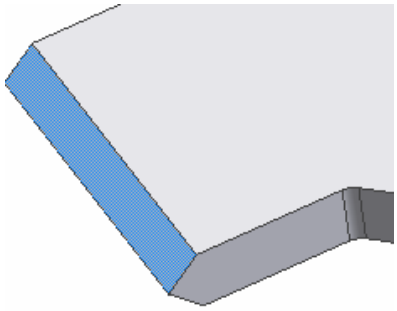
Faça clique em Extrude E para definir uma extrusão até à próxima face. Seleccione a opção *To Next*.

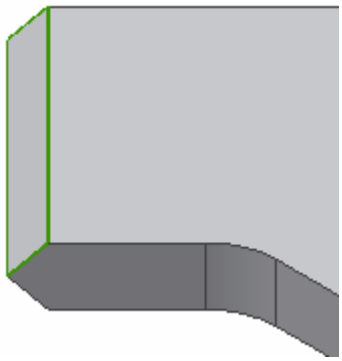




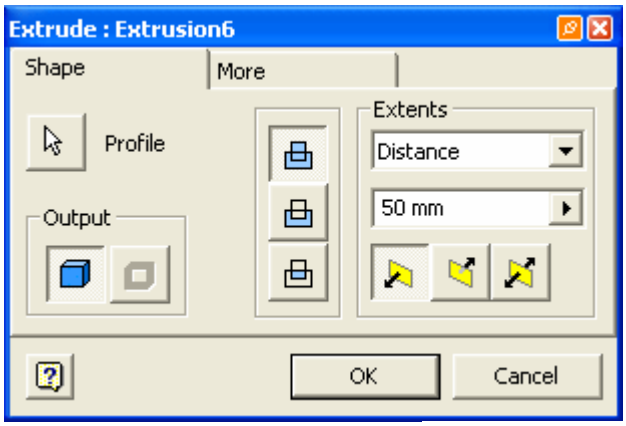


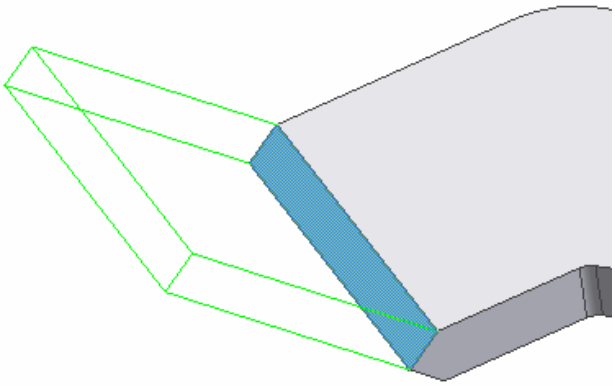
Faça clique em Sketch e seleccione a face indicada do modelo para definir um novo plano de *Sketch*.

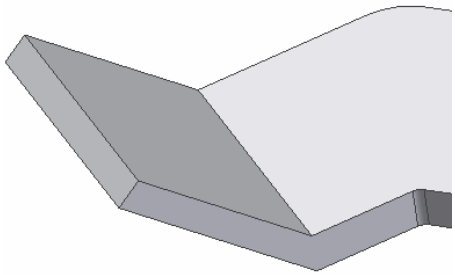




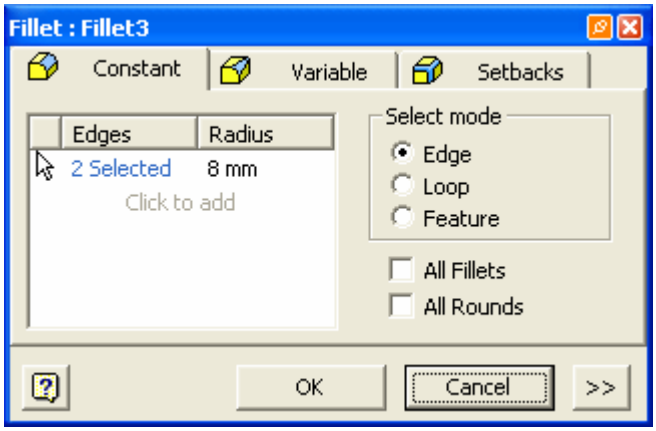
Faça clique em Extrude E ou em **E** para definir uma extrusão de **50mm**.

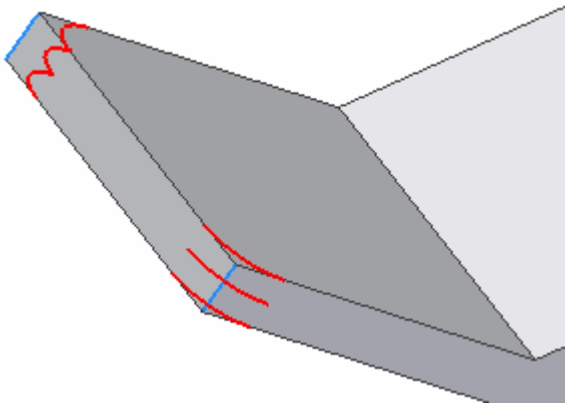


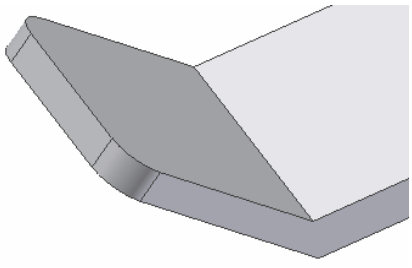




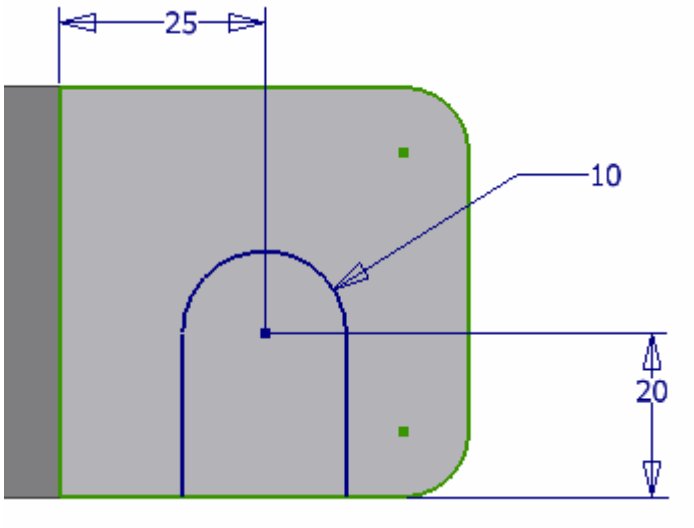
Faça clique em Fillet Shift+F para definir um raio de **8mm** nas arestas indicadas do modelo.



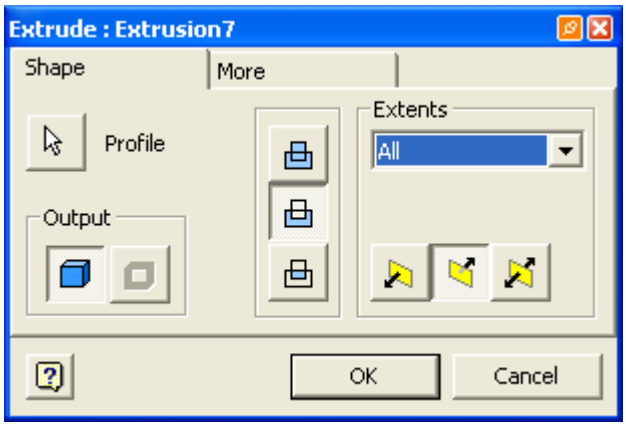


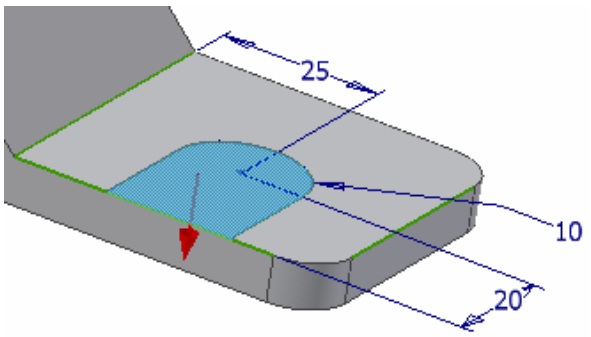


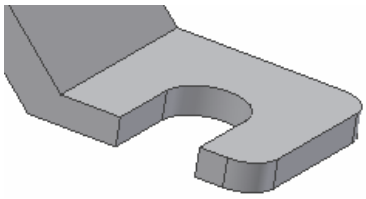
Crie o *Sketch* seguinte.



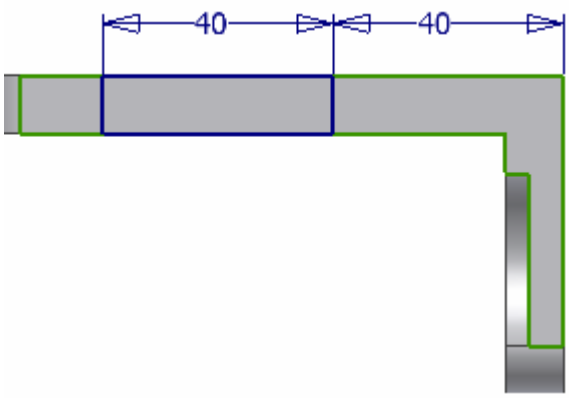
Faça clique em Extrude E para definir uma extrusão em corte. Seleccione a opção e o método *All* para o corte cruzar todo o modelo.



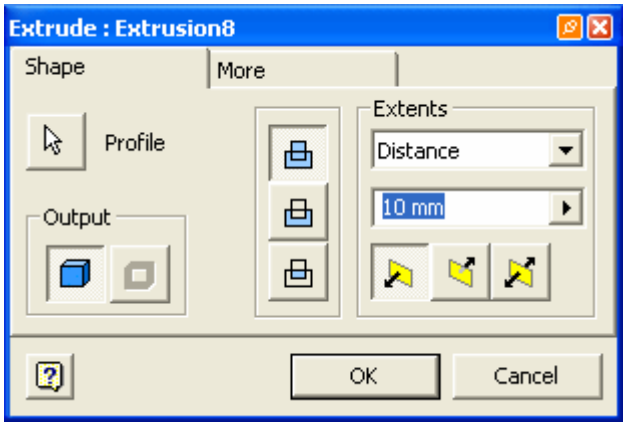


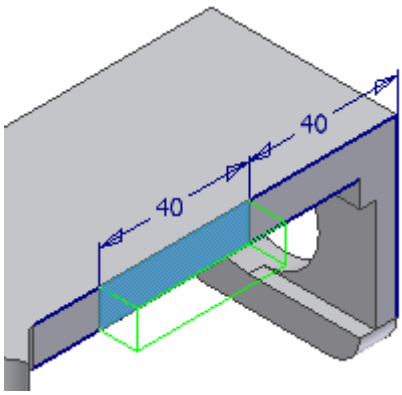


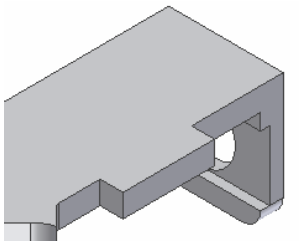
Crie o *Sketch* seguinte.



Faça clique em Extrude E ou em **E** para definir uma extrusão de **10mm**.

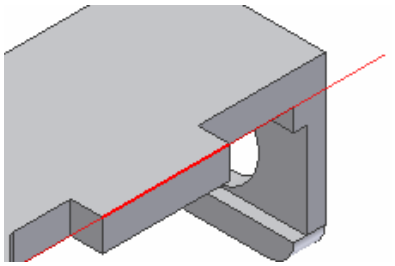


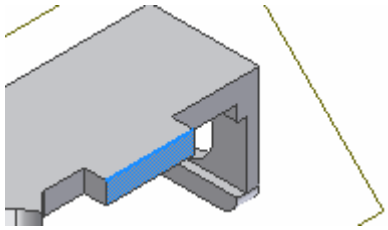


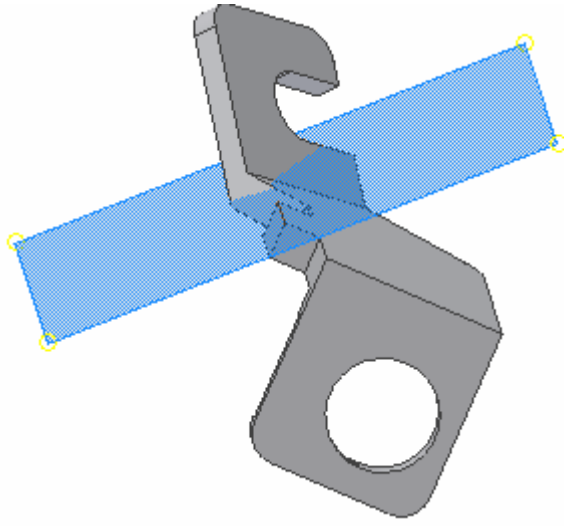


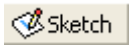
Criar um plano que passe por aresta do modelo e faça um determinado ângulo com uma face do modelo.

Faça clique em Work Plane para criar o plano. Seleccione a aresta e a face em relação à qual deseja definir o valor do ângulo.





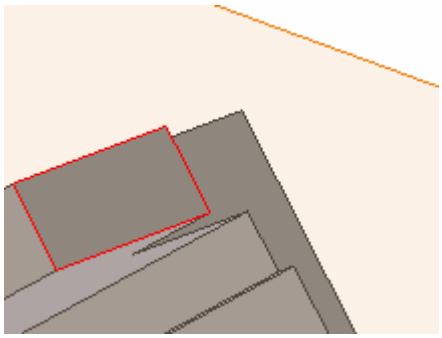


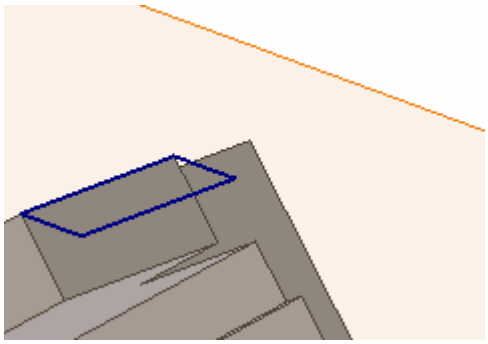
Faça clique em 

e seleccione o plano anterior para definir um novo plano de *Sketch*.

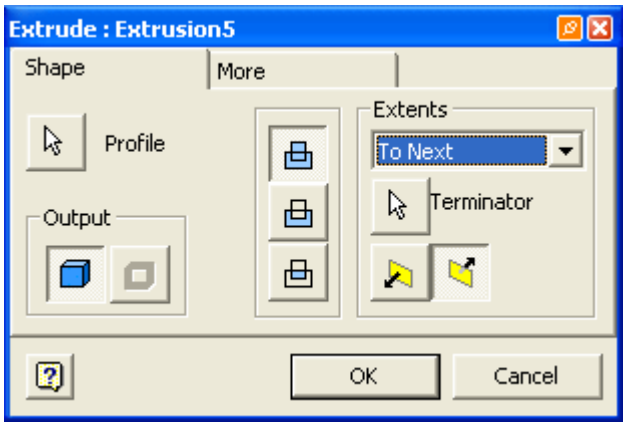
Faça clique em 

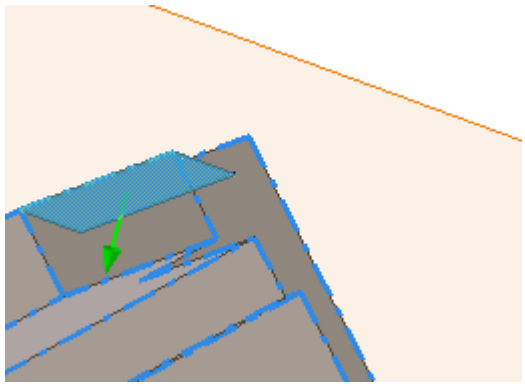
para projectar a face, seleccionada anteriormente, sobre o plano.

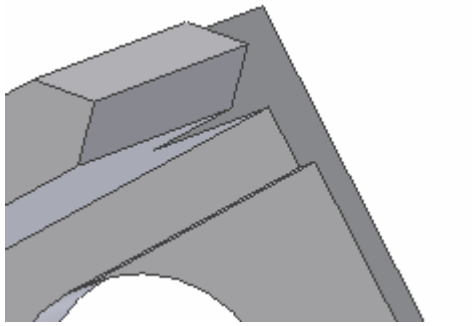




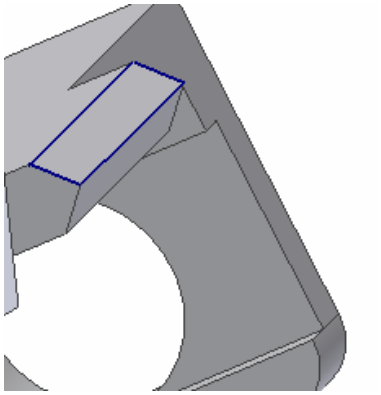
Faça clique em Extrude E para definir uma extrusão até à próxima face. Seleccione a opção *To Next*.

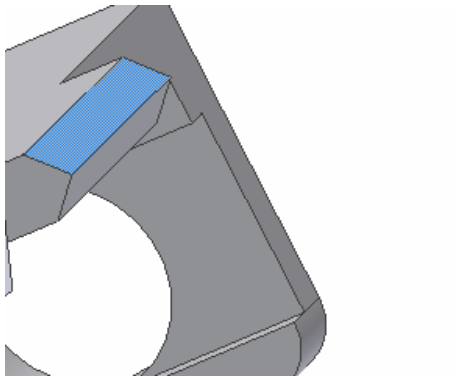




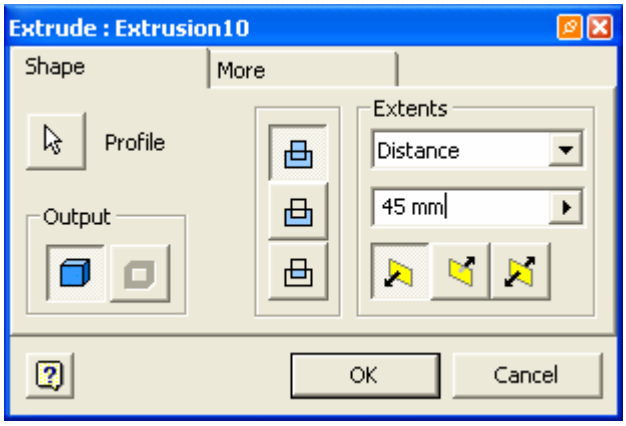


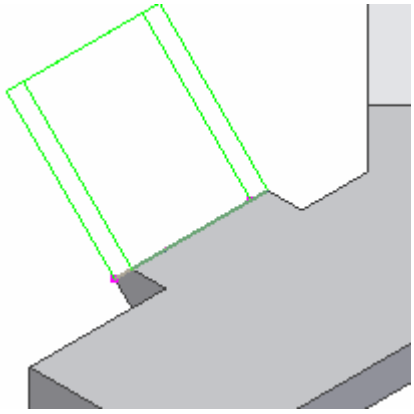
Faça clique em Sketch e seleccione a face indicada do modelo para definir um novo plano de *Sketch*.

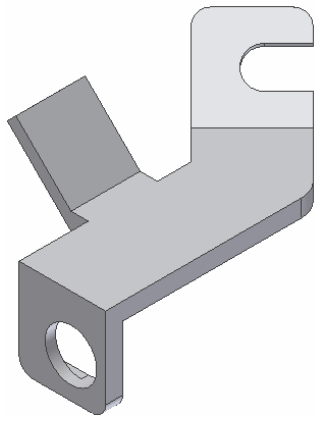


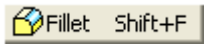


Faça clique em Extrude E ou em **E** para definir uma extrusão de **45mm**.

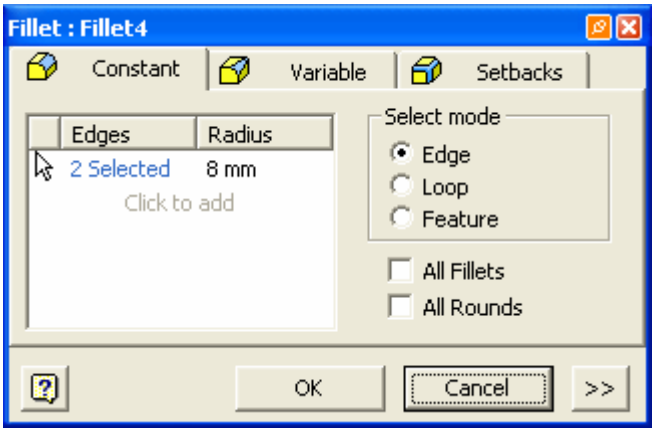


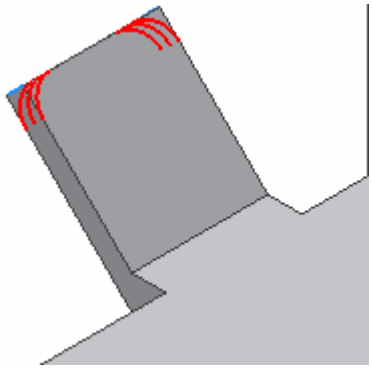


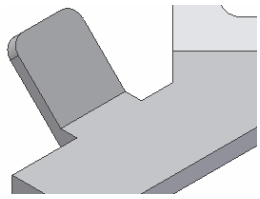


Faça clique em 

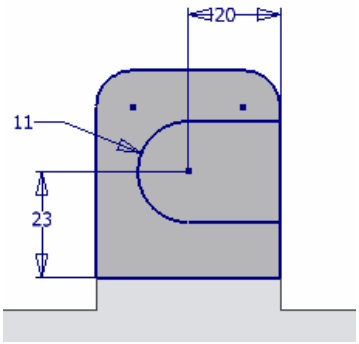
para definir um raio de **8mm** nas arestas indicadas do modelo.



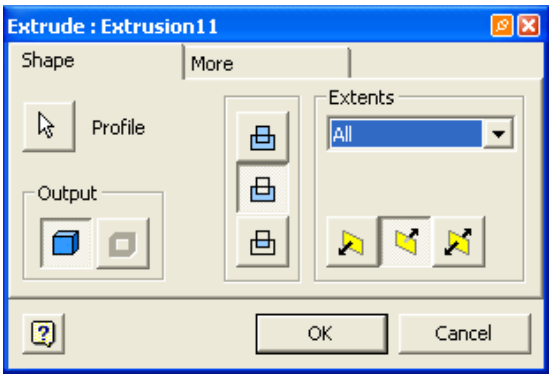


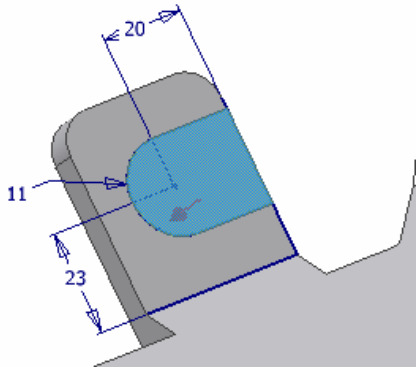


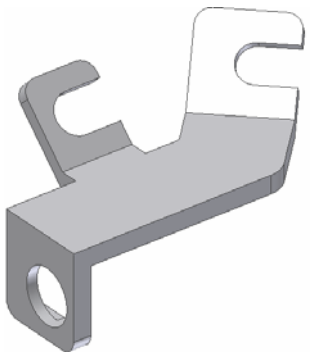
Crie o *Sketch* seguinte.



Faça clique em Extrude E para definir uma extrusão em corte. Seleccione a opção  e o método *All* para o corte cruzar todo o modelo.

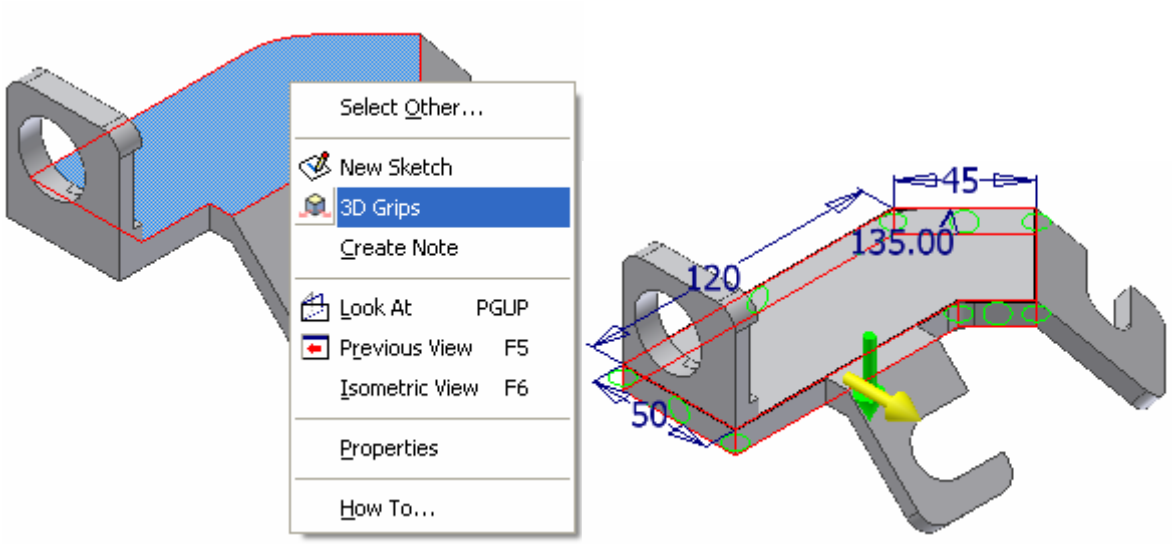






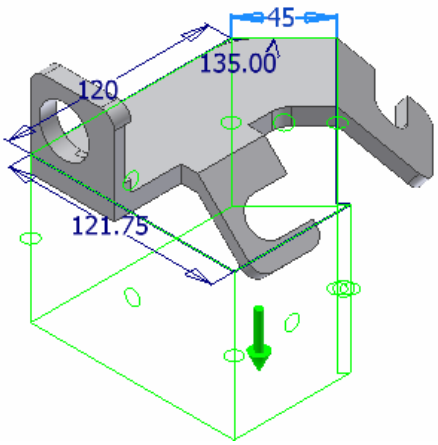
3D Grips

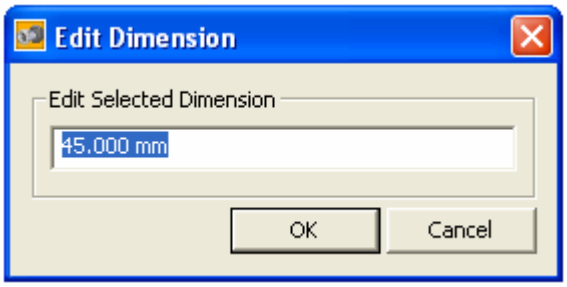
Pode alterar dinamicamente a forma do modelo, fazendo clique com o botão direito sobre o modelo e seleccionando a opção *3D Grips*.

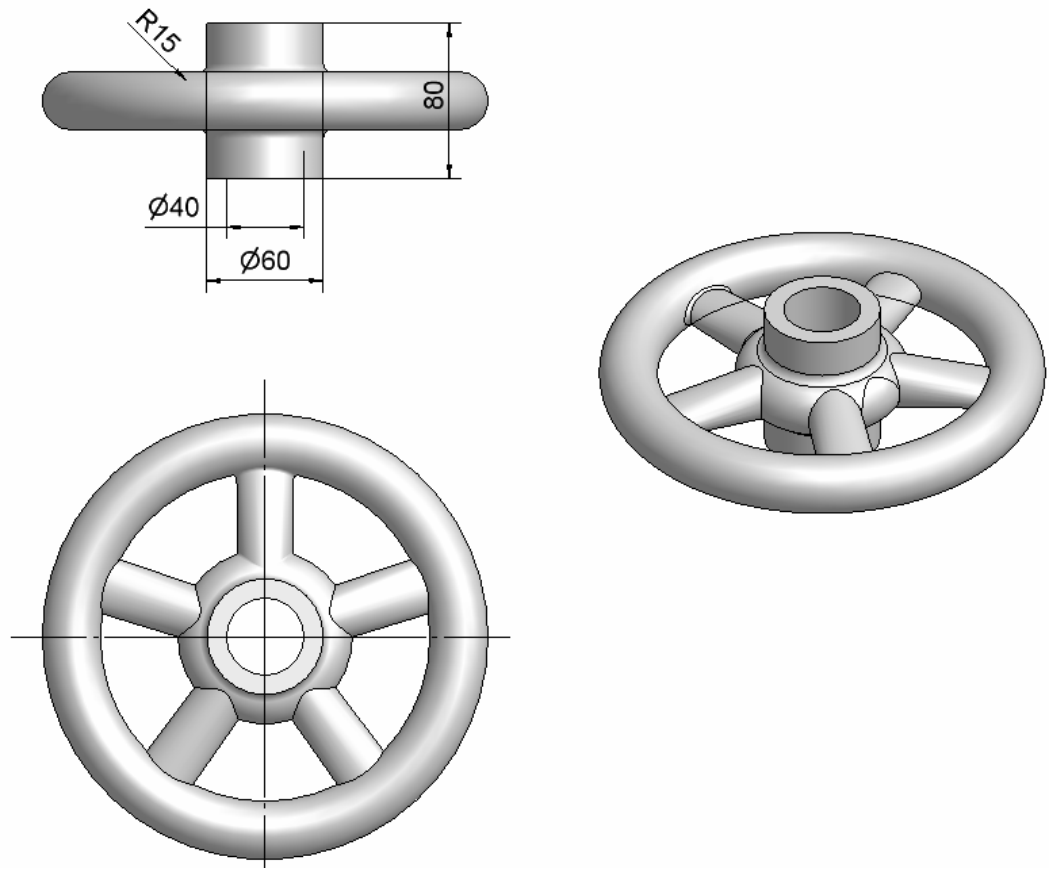


Arraste as setas apresentadas para alterar a forma do modelo.

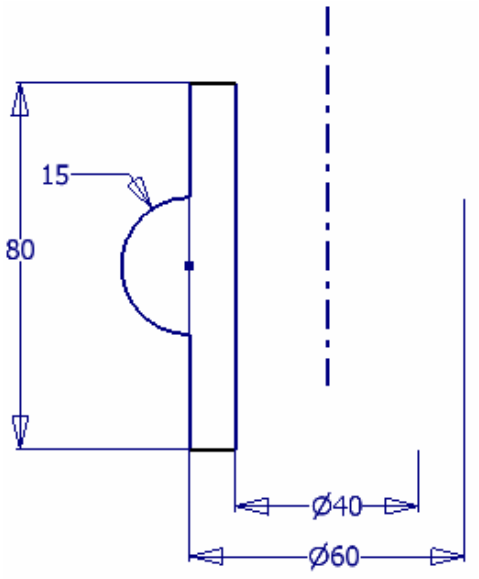
Faça duplo clique sobre as cotas para alterar o seu valor.



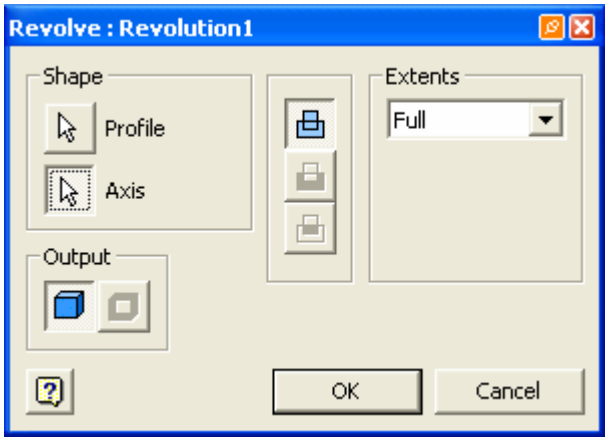


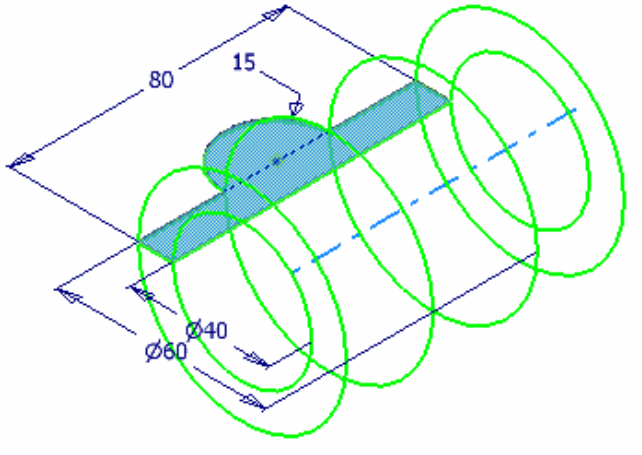


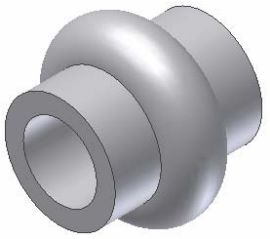
Crie o *Sketch* seguinte.



Faça clique em Revolve R ou **R** para definir uma revolução do perfil em **360°**.

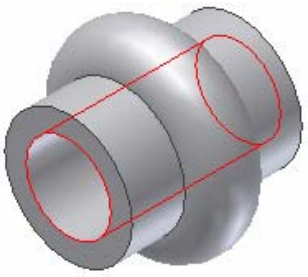


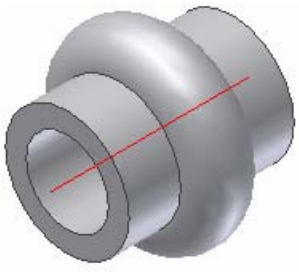




Criar um eixo

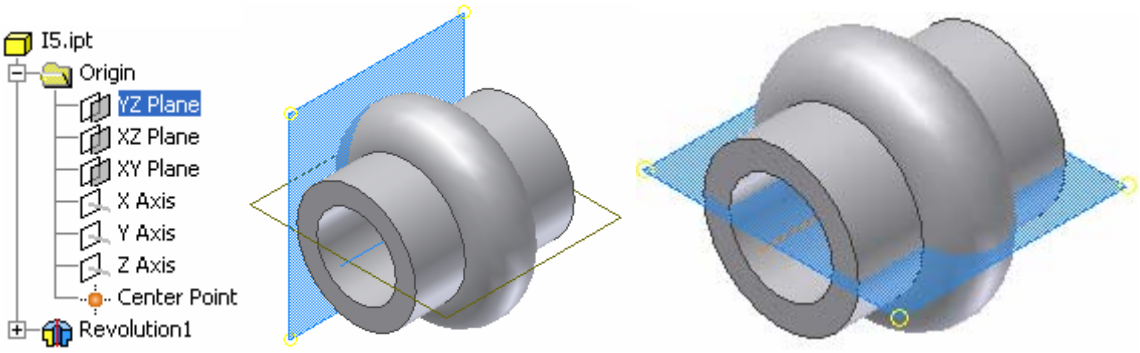
Faça clique em Work Axis TIL para criar um *eixo* no centro da forma cilíndrica. Seleccione a superfície cilíndrica do furo.



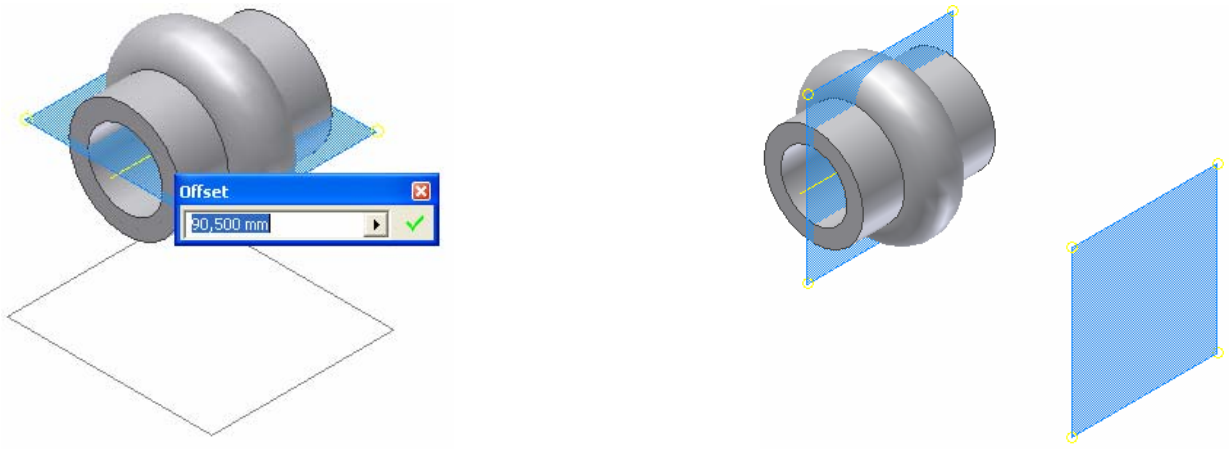


Faça clique em Work Plane « para criar um plano que passe pelo centro do modelo.

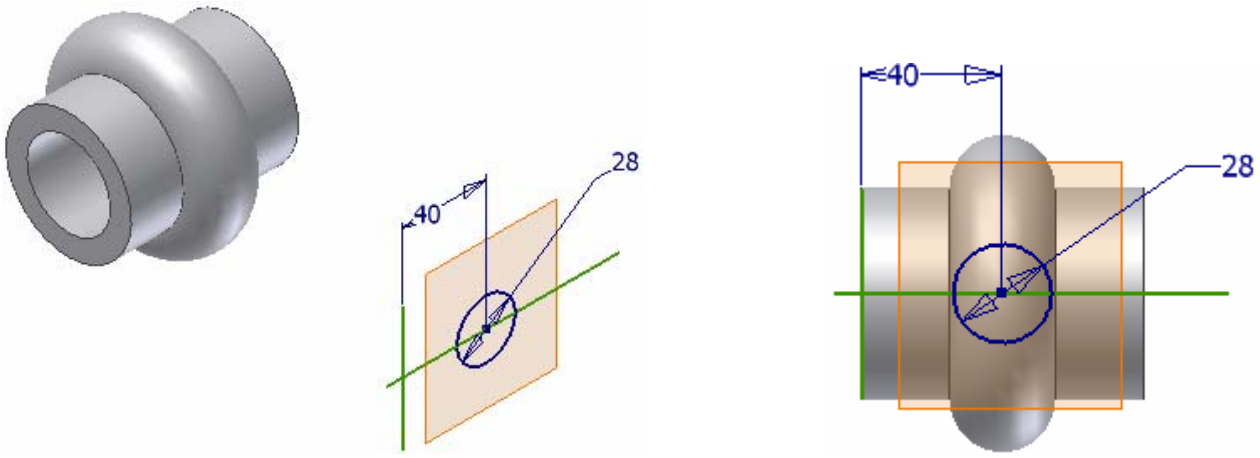
Seleccione o eixo definido anteriormente e um plano da pasta *Origin*.



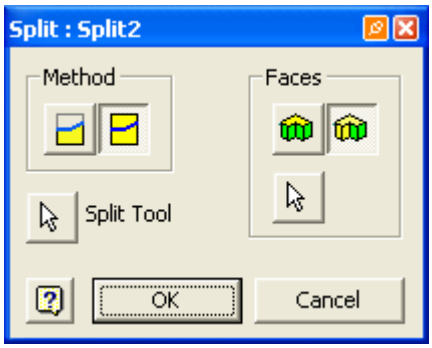
Faça clique em Work Plane para criar um plano paralelo, ao definido anteriormente, à distância de **160mm**.

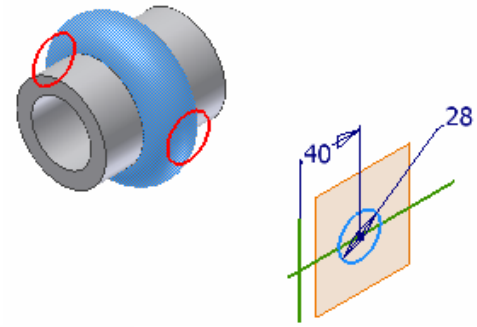


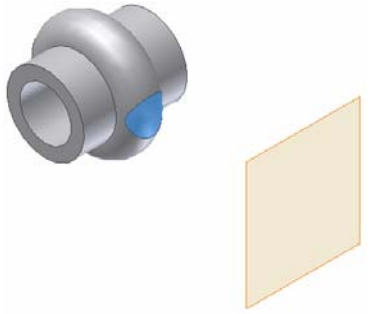
Faça clique em Sketch e seleccione o plano, criado anteriormente, para definir um novo plano de *sketch*. Crie o *sketch* seguinte.



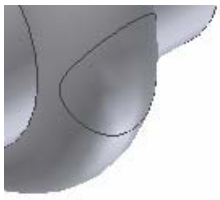
Faça clique em Split para projectar o *sketch*, definido anteriormente, sobre a face seleccionada do modelo. O *sketch* projectado vai dividir a face em duas partes, uma dentro do *sketch* e outra fora. Faça clique em para dividir a face e não o modelo. Faça clique em e seleccione a face a dividir.

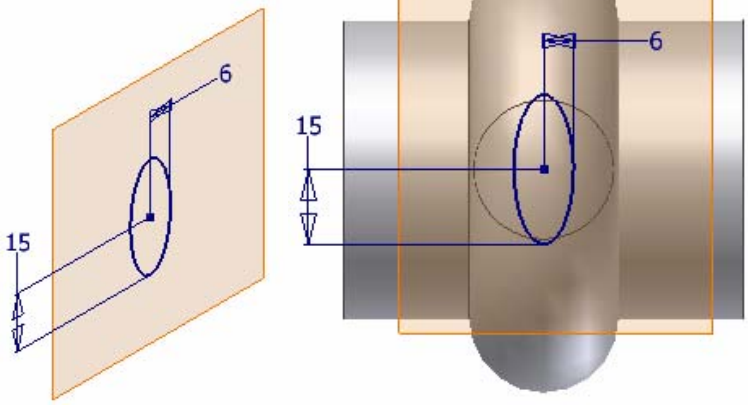




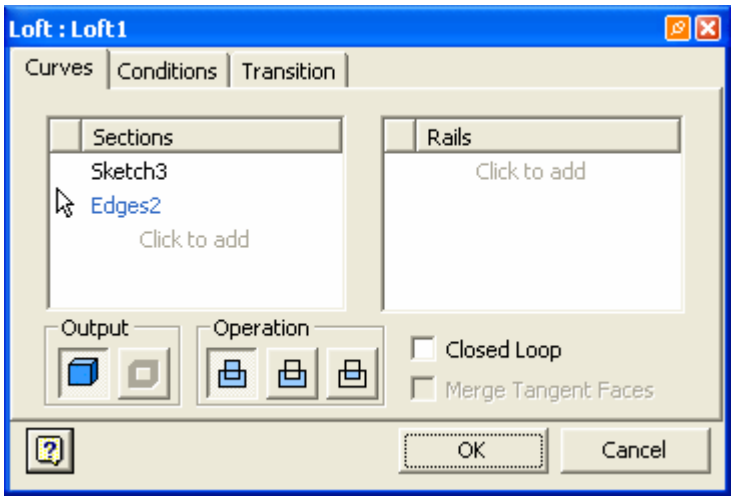


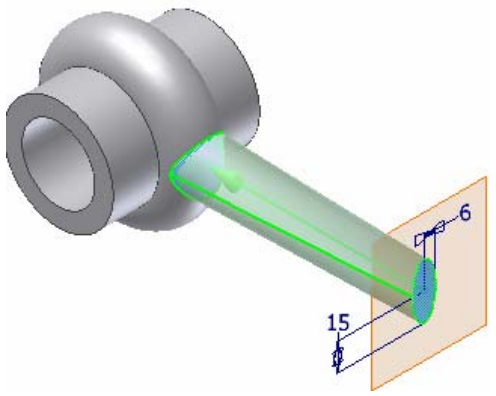
Faça clique em Sketch e seleccione o último plano criado. Faça clique em Ellipse e crie o *sketch* seguinte.

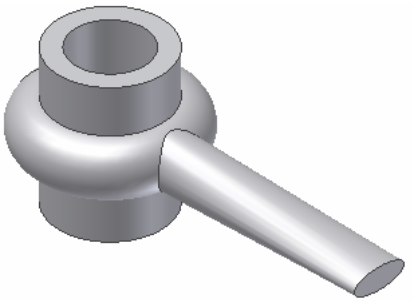




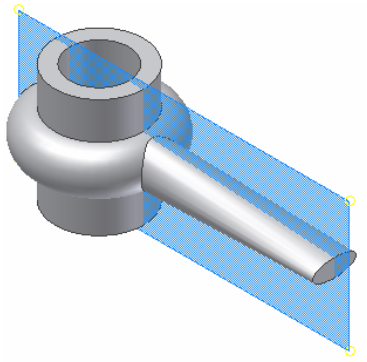
Faça clique em Loft Shift+L para definir uma forma, através da transição entre a face projectada e o *Sketch* anterior.



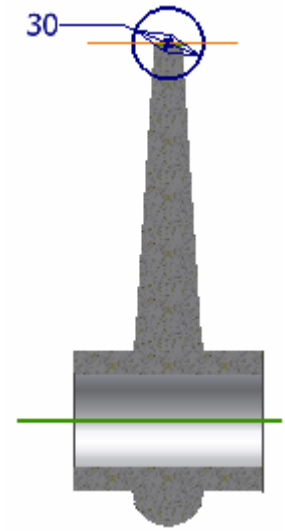




Faça clique em Work Plane « para criar o plano seguinte.

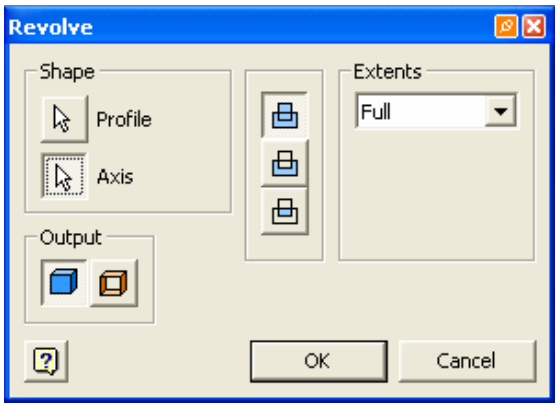


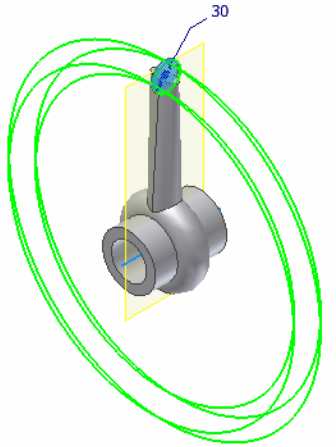
Faça clique em Sketch e seleccione o último plano criado. Faça clique em Center point circle e crie o *sketch* seguinte. Faça clique em **F7** para visualizar o modelo seccionado pelo o plano de *sketch*.



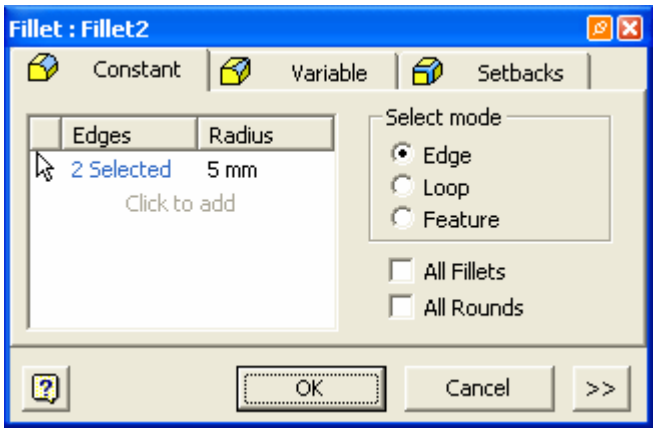
Faça clique em 

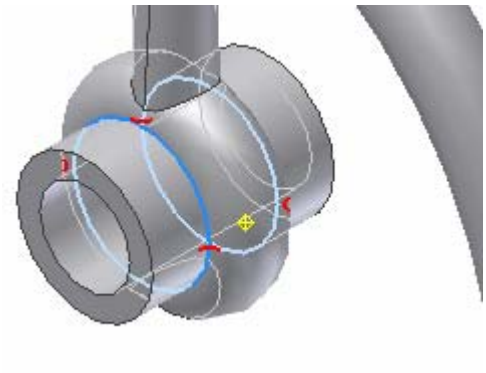
ou **R** para definir uma revolução do perfil em **360°**.



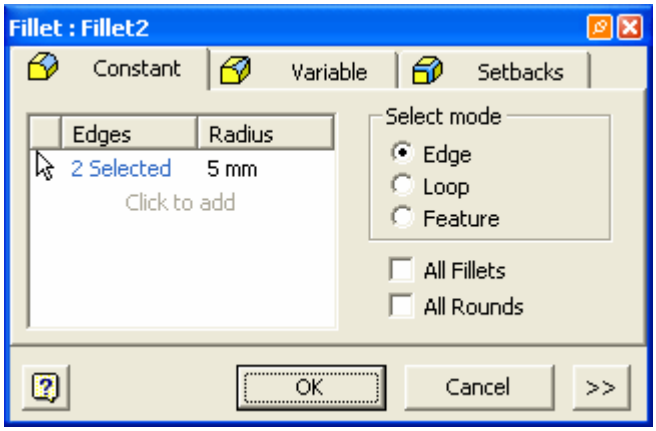


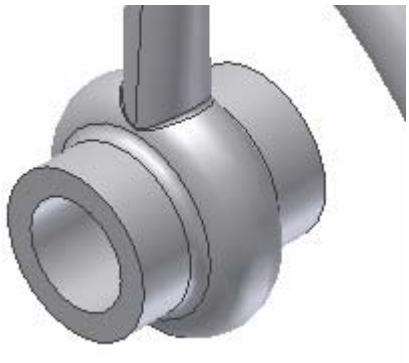
Faça clique em Fillet Shift+F para definir um raio de **5mm** nas arestas indicadas do modelo.





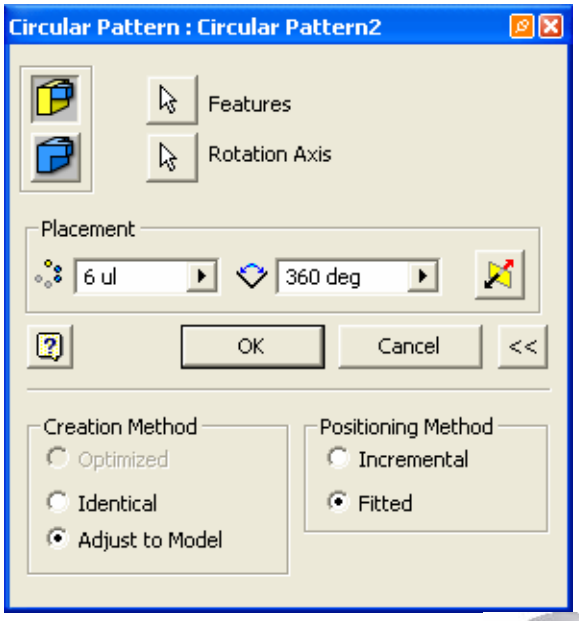
Faça clique em Fillet Shift+F para definir um raio de **5mm** nas arestas indicadas do modelo.

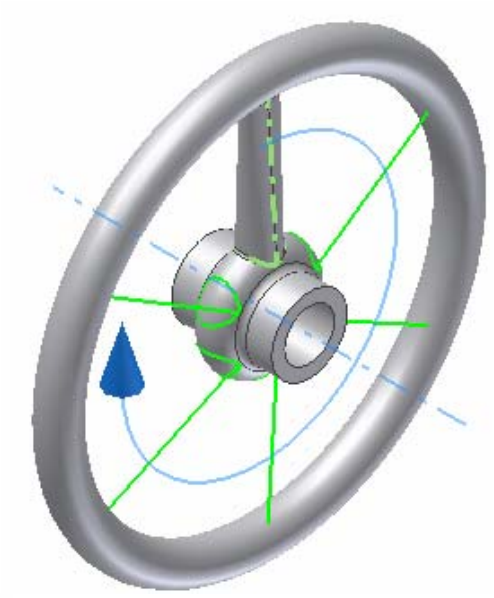


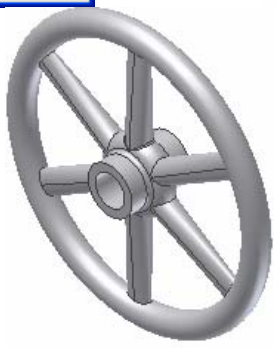


Faça clique em 

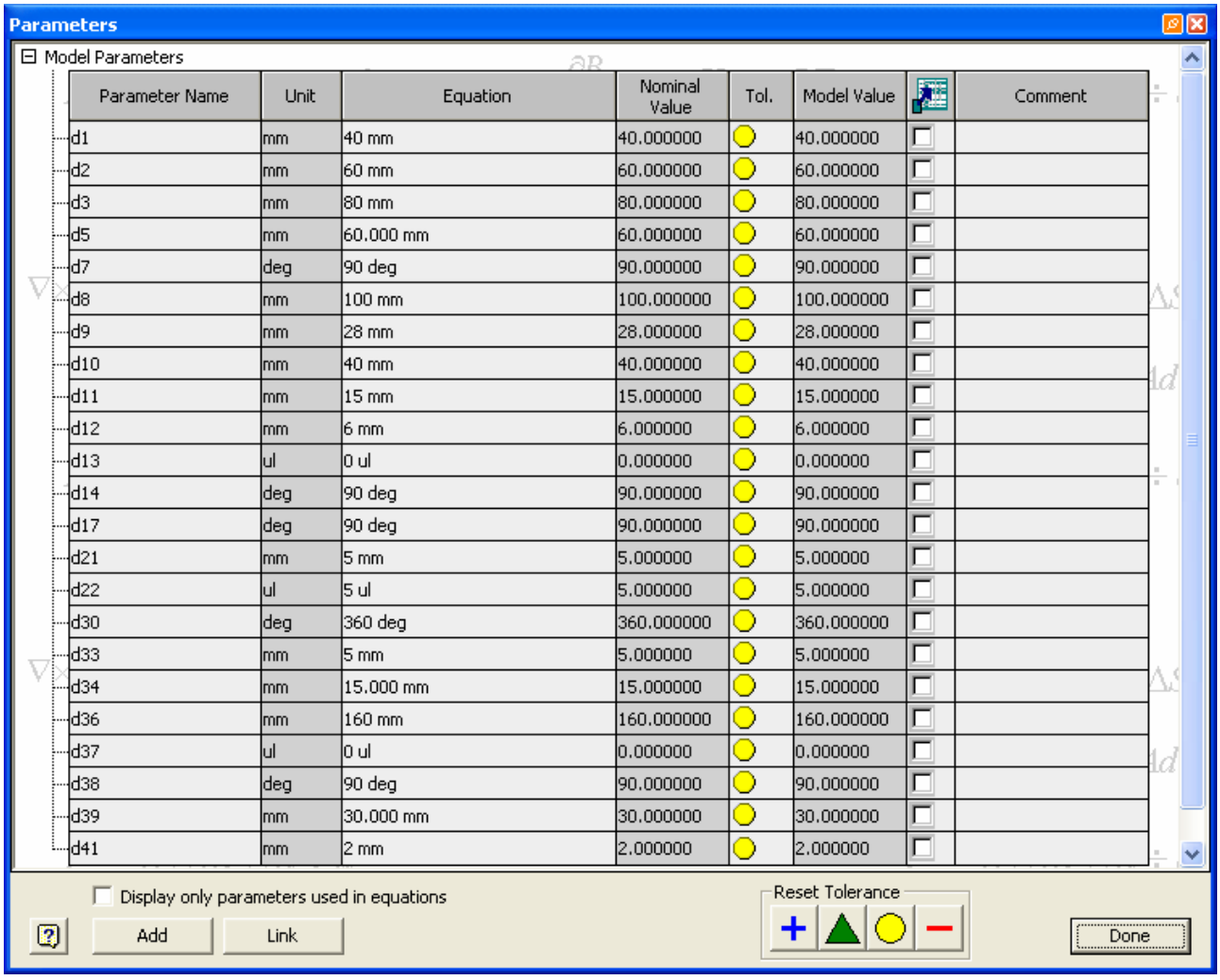
para definir uma cópia circular da haste. Faça clique em *Features* e seleccione as *Features Fillet* e *Loft* a partir do *Browser* ou da área gráfica. Em *Rotation Axis* seleccione um eixo do modelo ao alguma superfície cilíndrica cujo o seu eixo passe pelo centro do modelo.



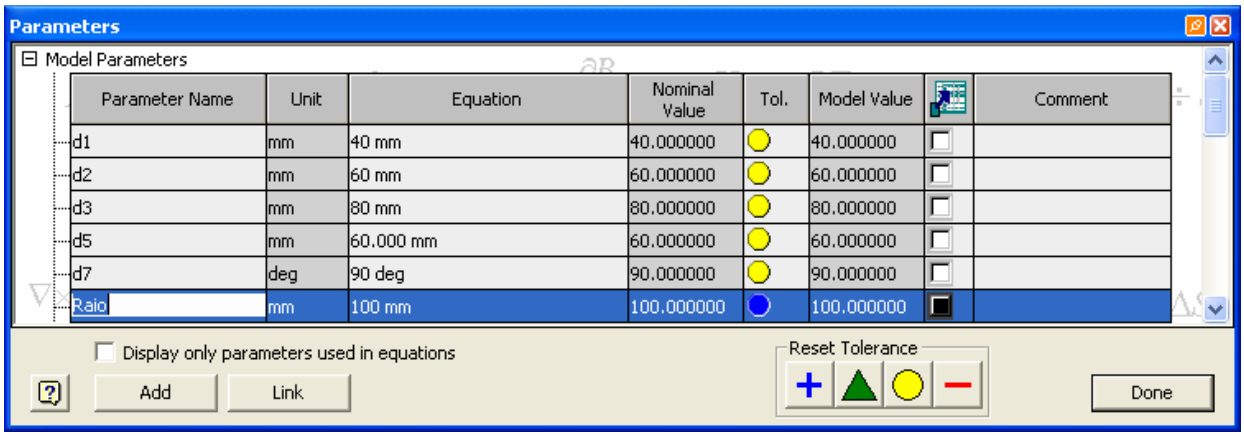


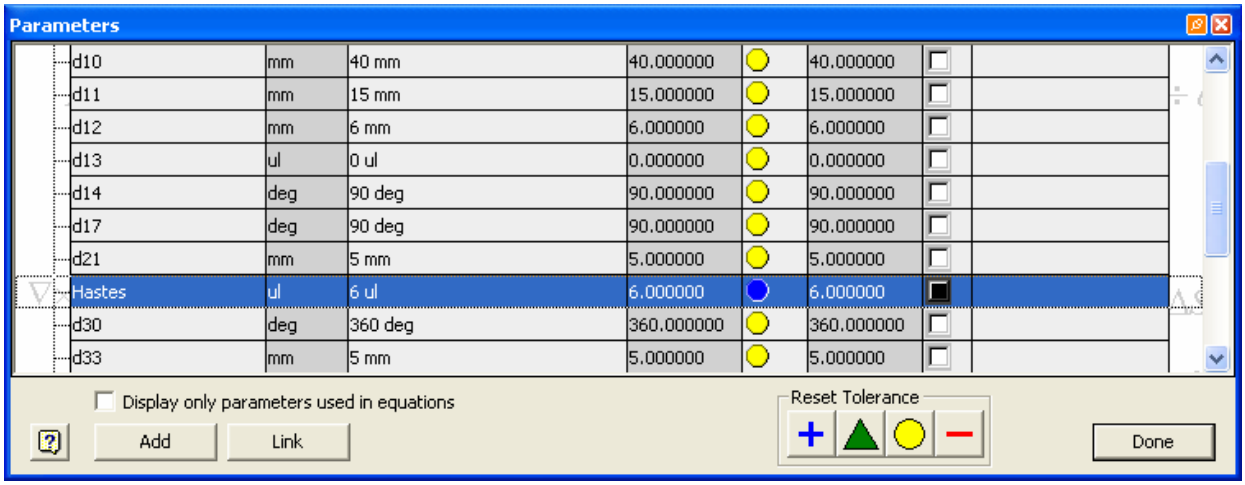


Faça clique em f_x Parameters para aceder aos parâmetros do modelo.

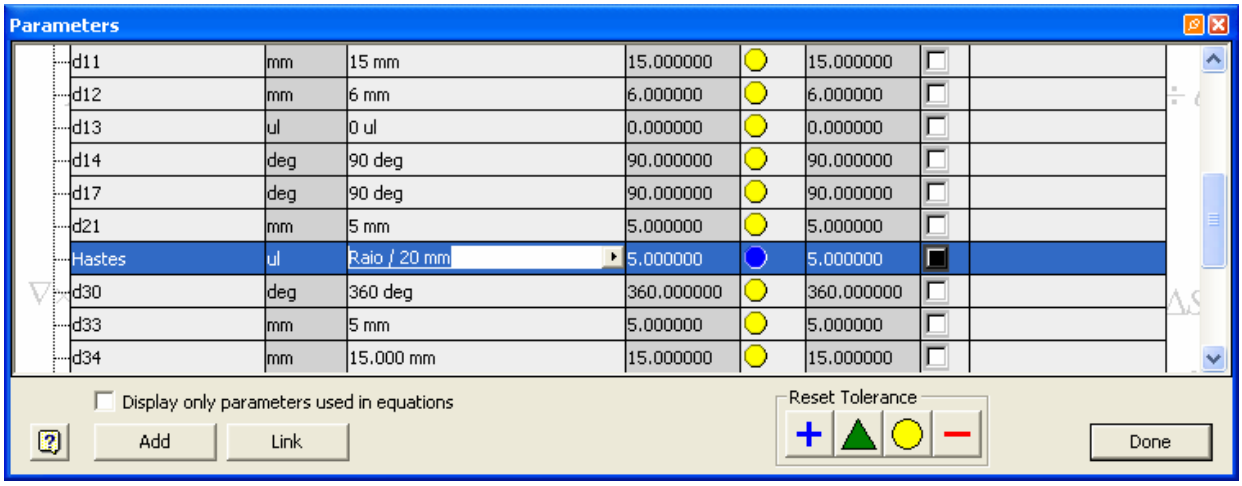


Identifique os parâmetros associados ao diâmetro do modelo e ao número de hastes e substitua os respectivos nomes por **Raio** e **Hastes**





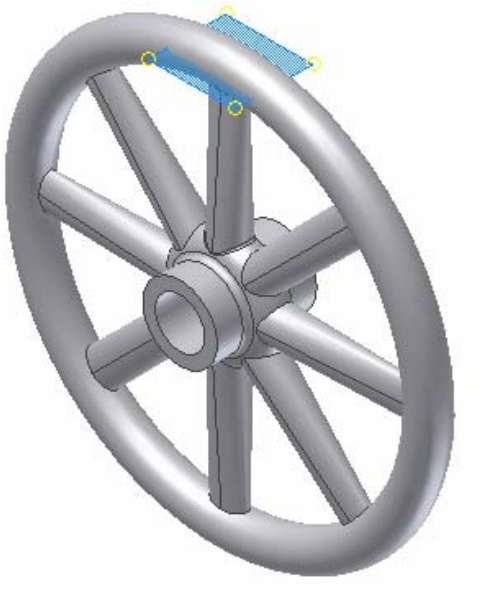
No parâmetro **Hastes** defina a seguinte equação: **Hastes = Raio / 20 mm**



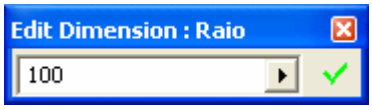
Faça 

Faça clique em 

para actualizar o modelo.



Altere a dimensão para **100mm**.



Faça clique em 

para actualizar o modelo.