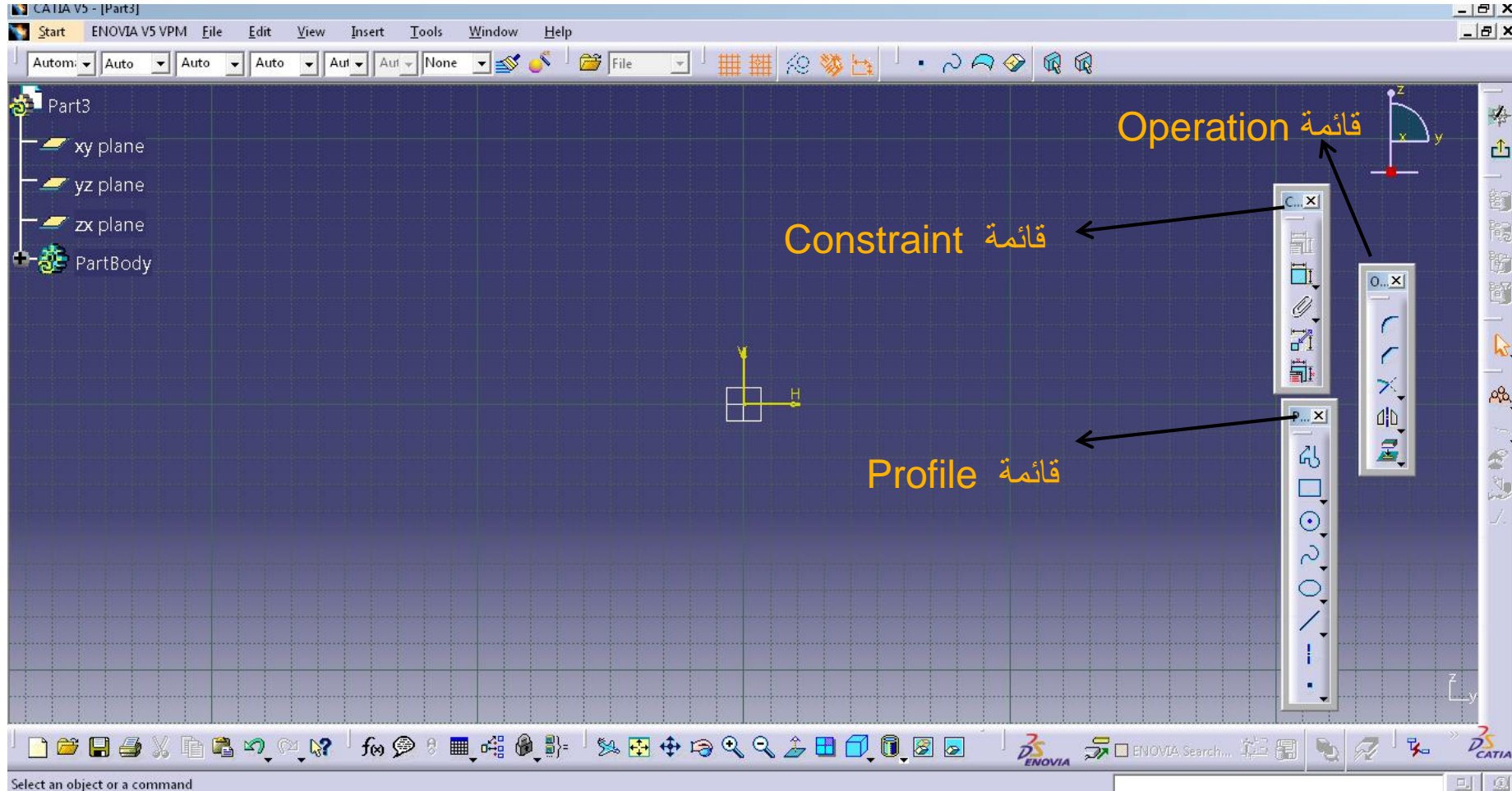


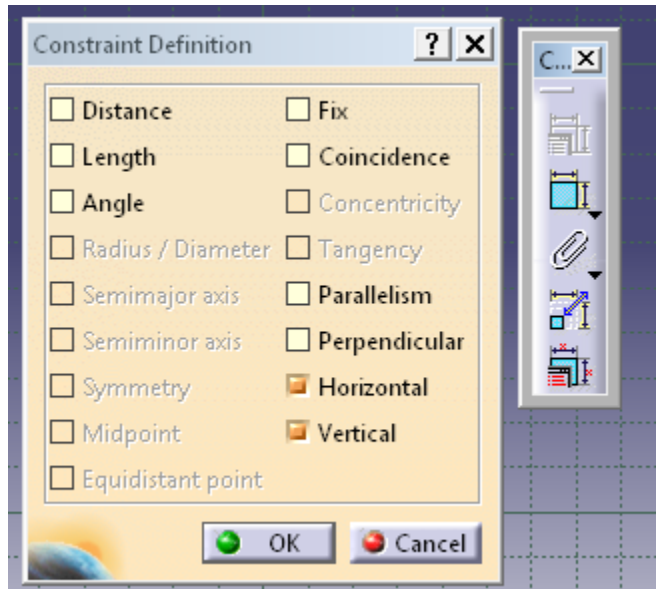
# المحاضرة الثالثة

## التصميم بمساعدة الحاسب



في البيئة ثنائية البعد سوف نهتم بثلاث قوائم رئيسية



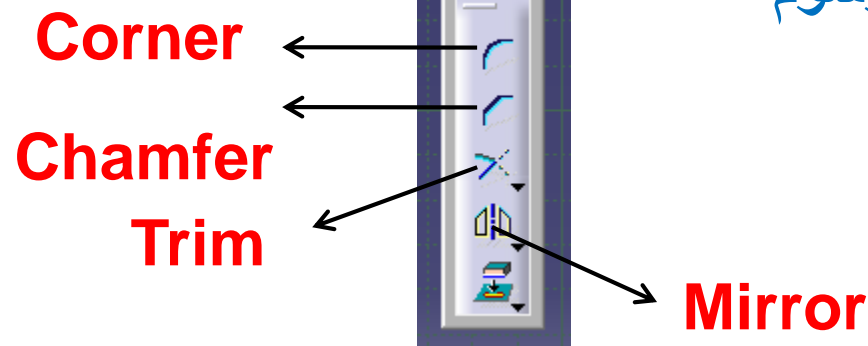


## قائمة Constraint

هدف الأوامر الموجودة في هذه القائمة هو وضع القيود من أبعاد و زوايا وقيود توازي و تعامد و تماس على الشكل الهندسي

## قائمة Operation

هدف الأوامر الموجودة في هذه القائمة هو إجراء تعديلات على الشكل الهندسي المرسوم

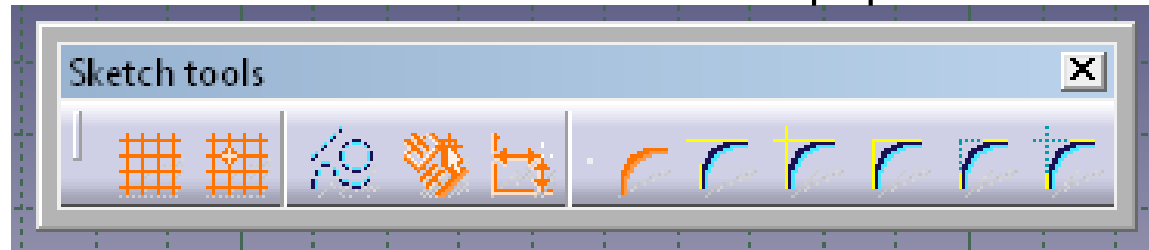


## Creating Corners

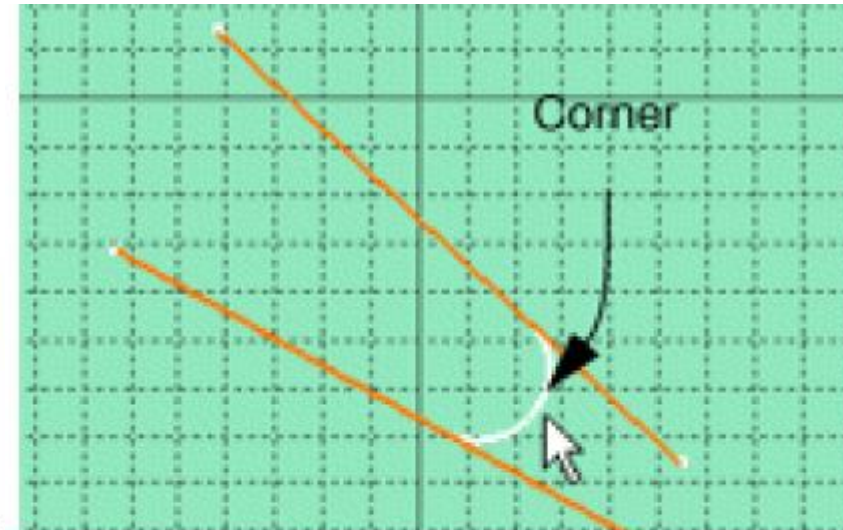
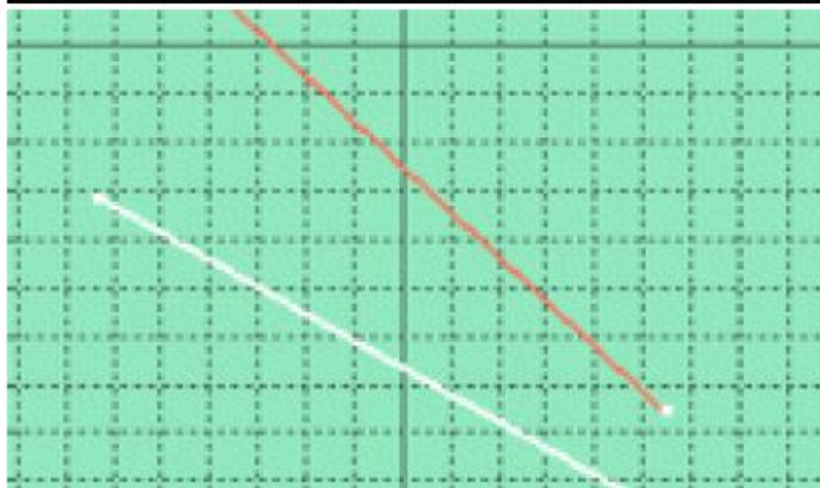
Corner



طرق مختلفة لرسم الزاوية

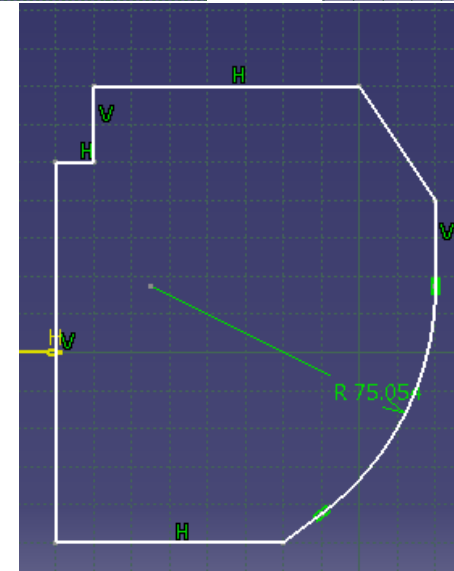
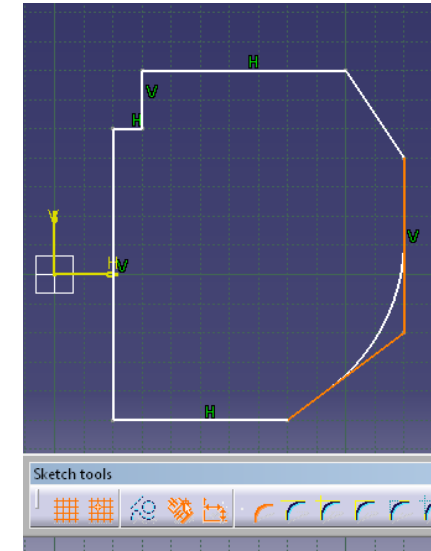
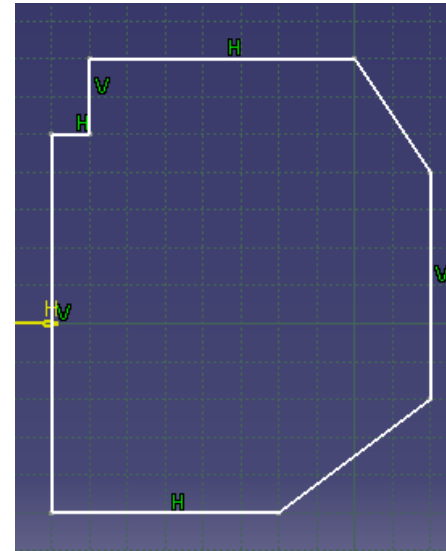
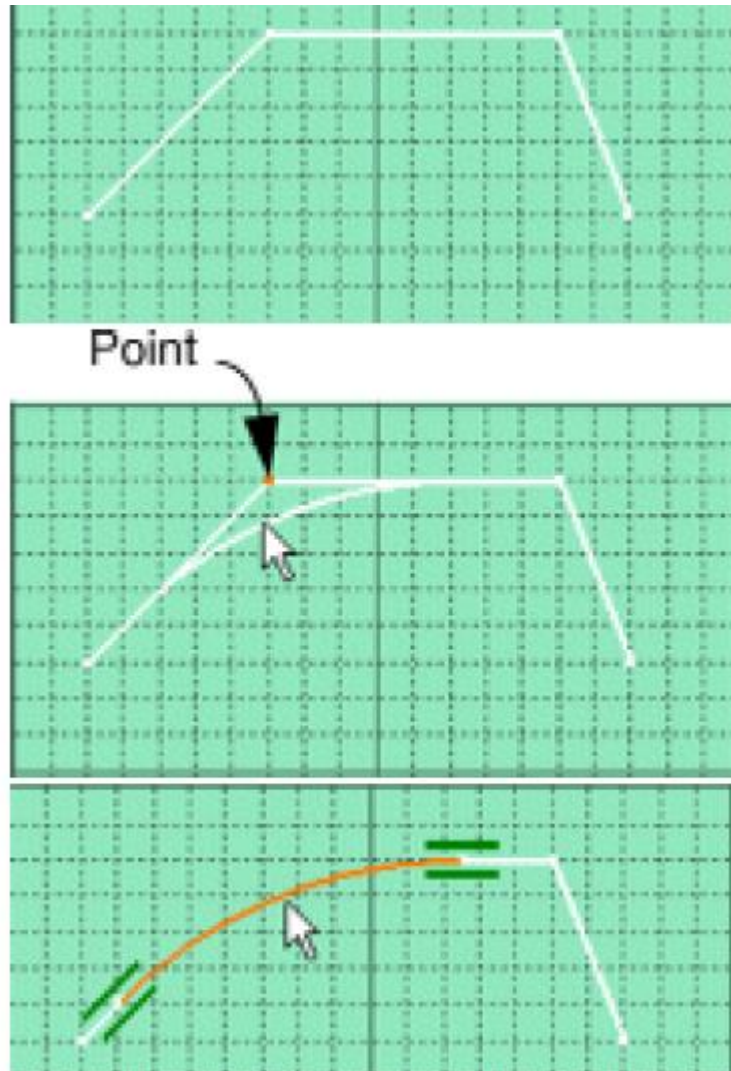


## Creating Corners With Both Elements Trimmed

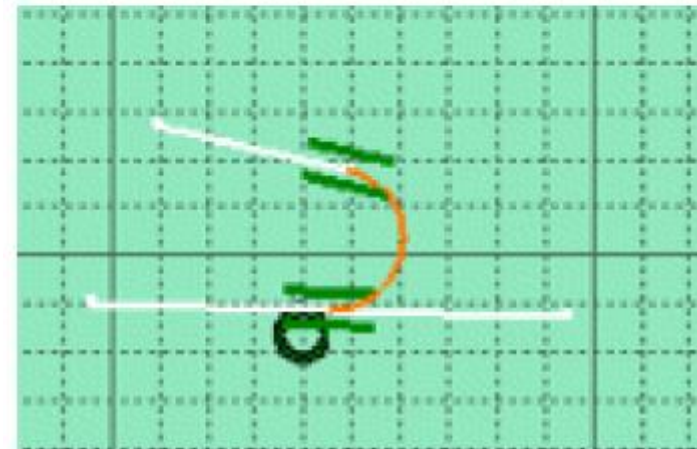
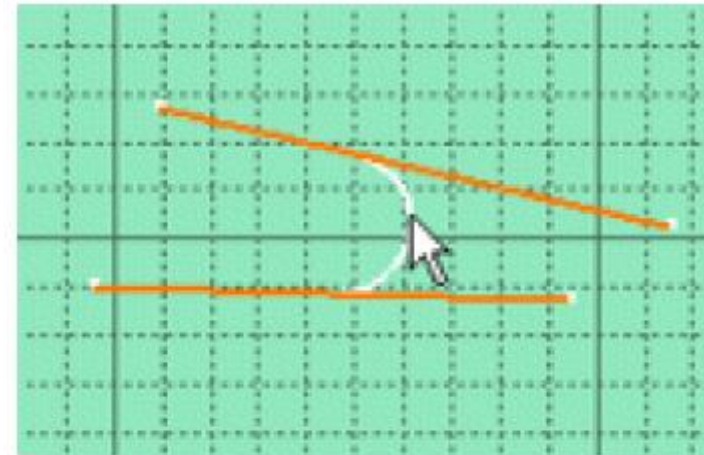
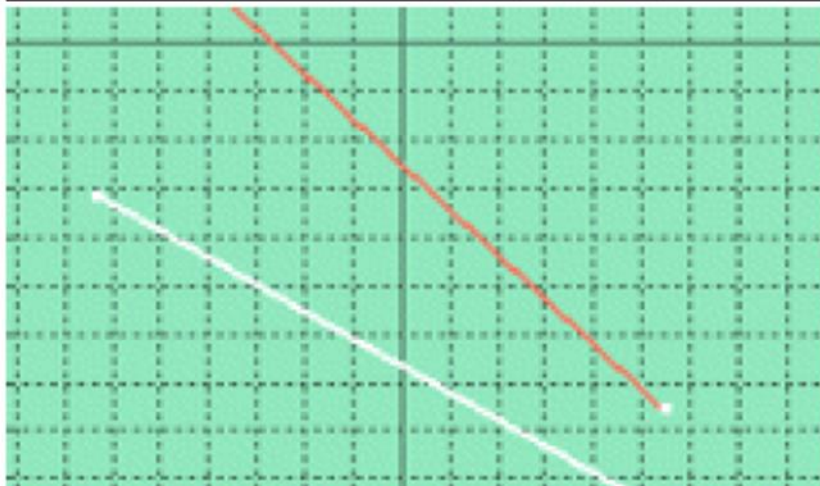
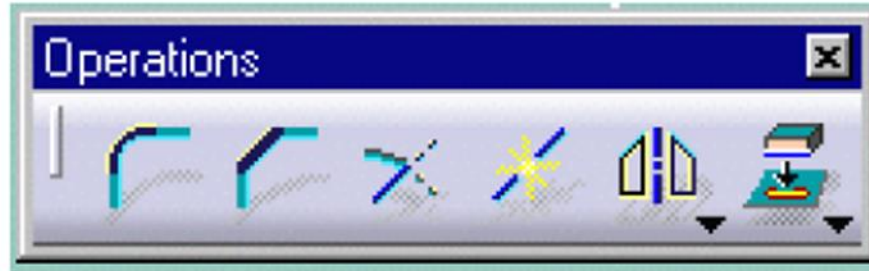




## مثال اخر عن استخدام تعليمة Corner

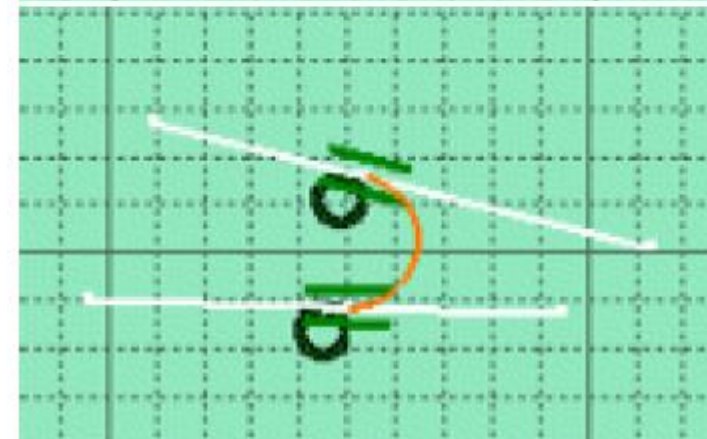
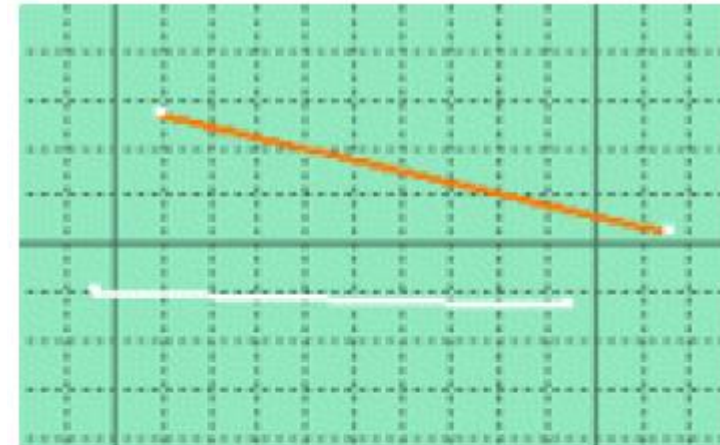
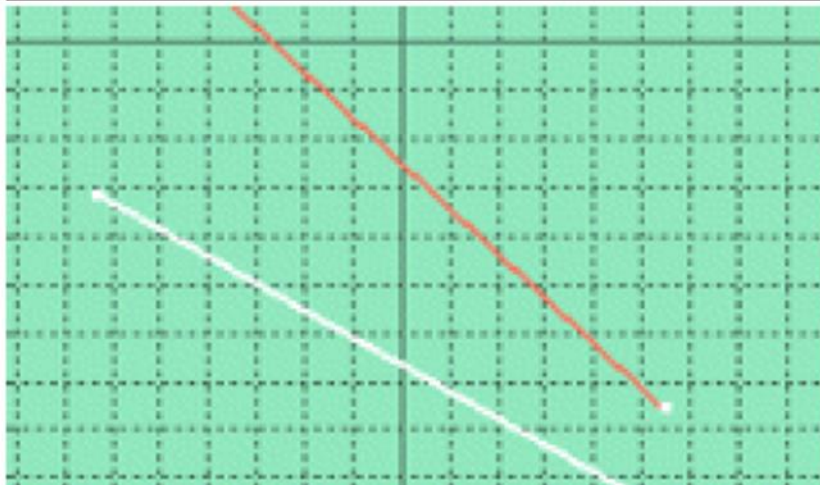


## Corners with One Element Trimmed





## Creating Corners with No Elements Trimmed



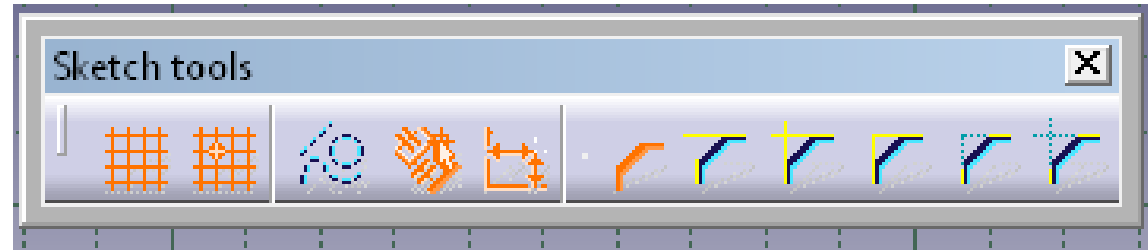


## Creating Chamfer

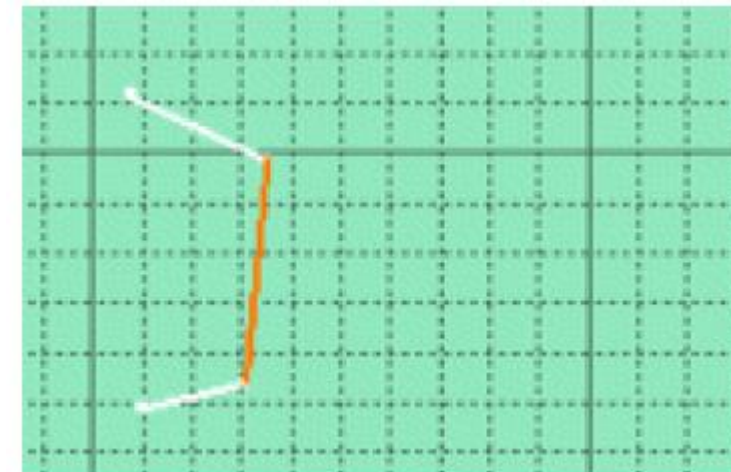
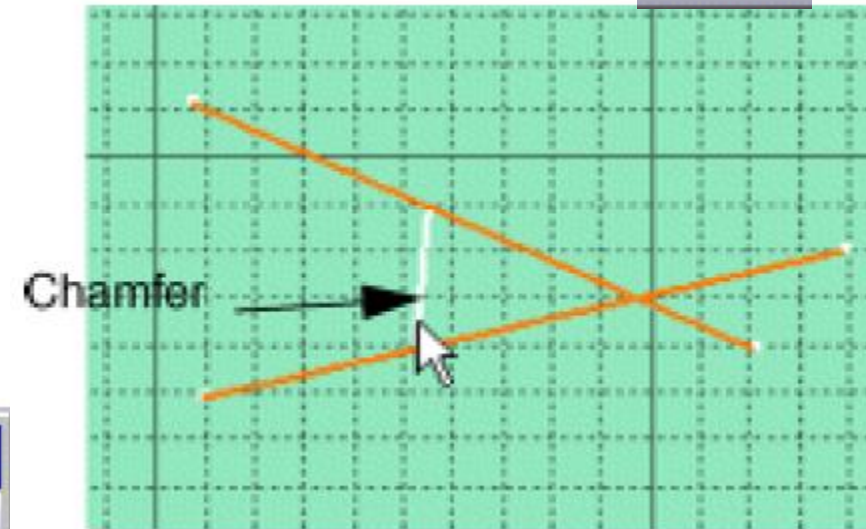
Chamfer



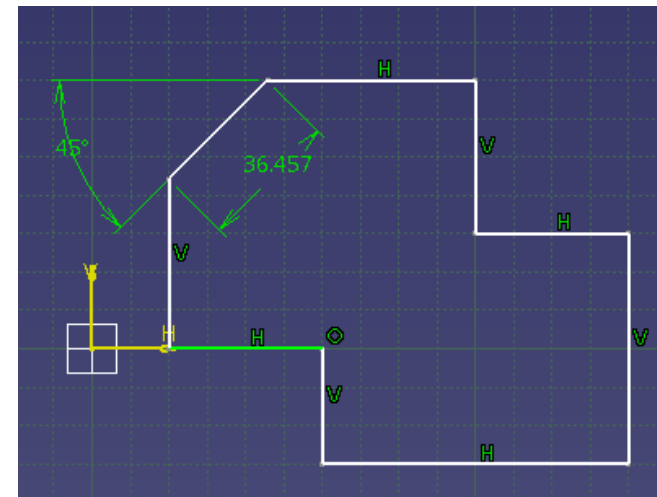
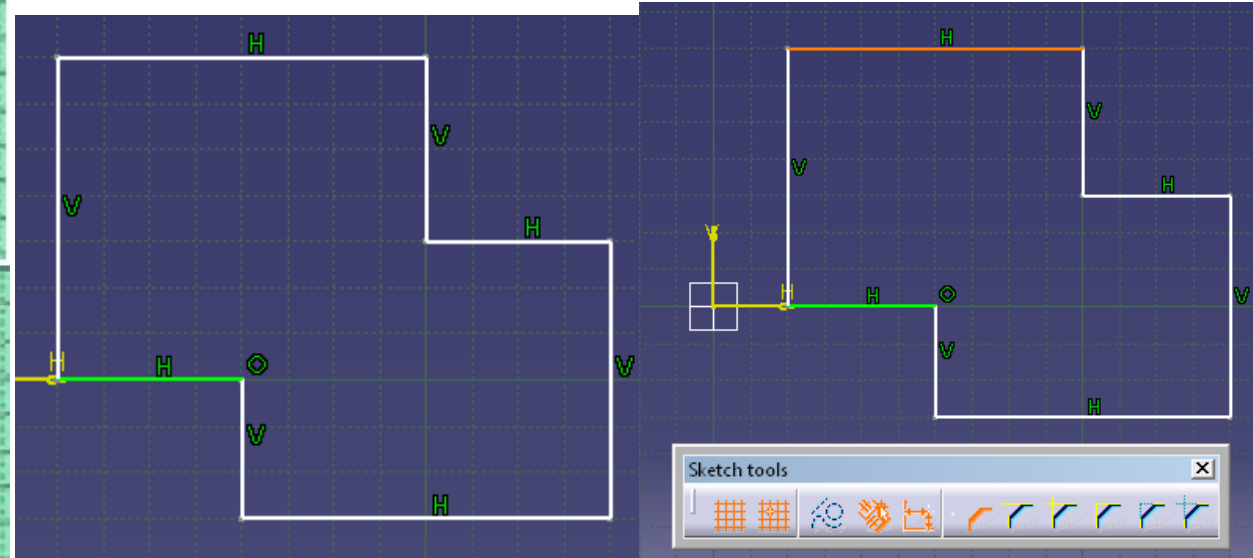
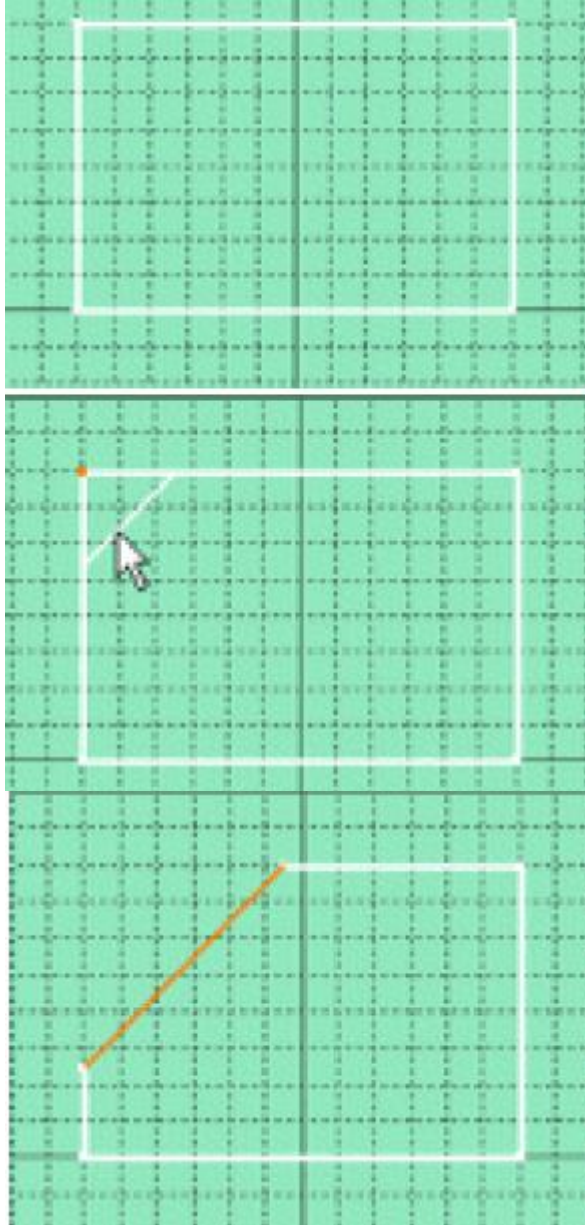
طرق مختلفة لرسم الشطفة



## Creating Chamfers With Both Elements Trimmed

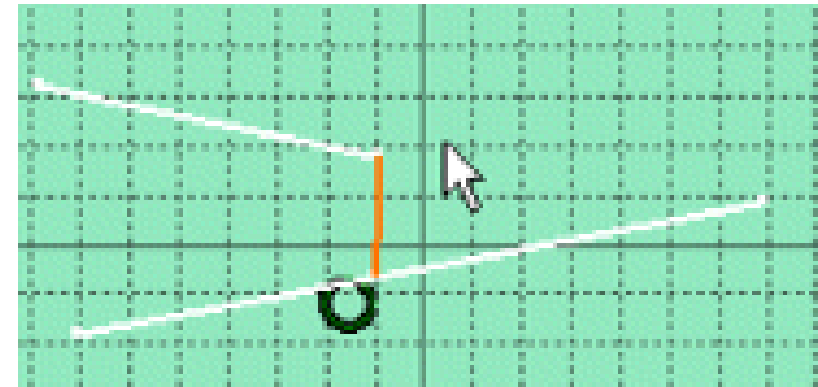
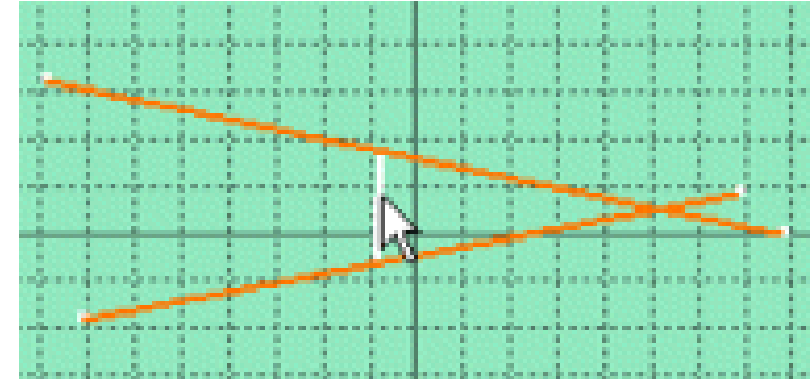


## مثال اخر عن استخدام تعليمة Corner

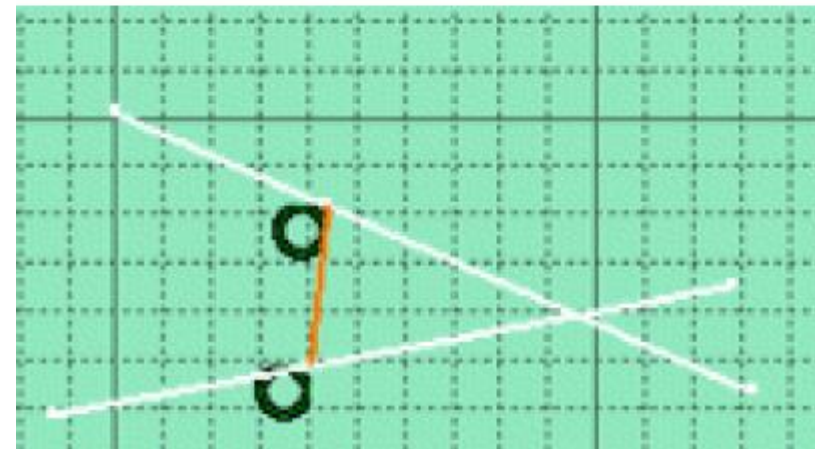




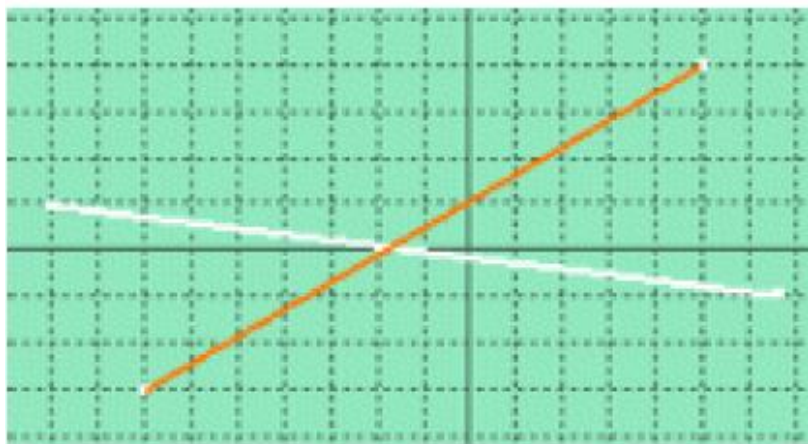
## Chamfers with One Element Trimmed



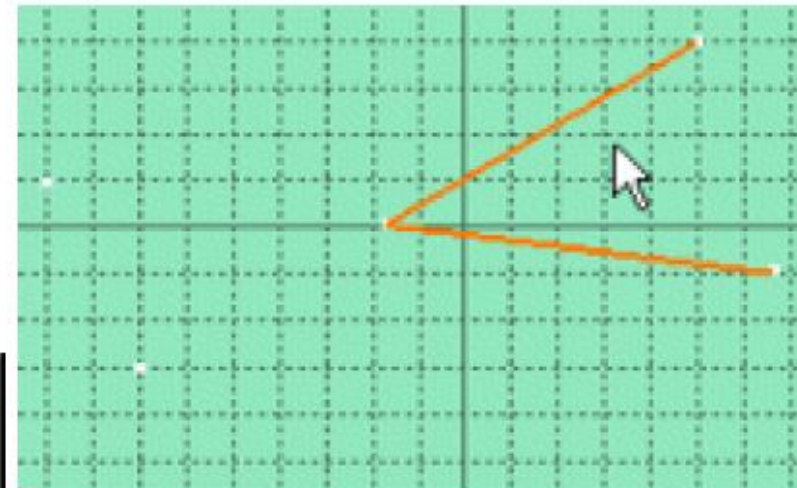
## Chamfers with No Elements Trimmed



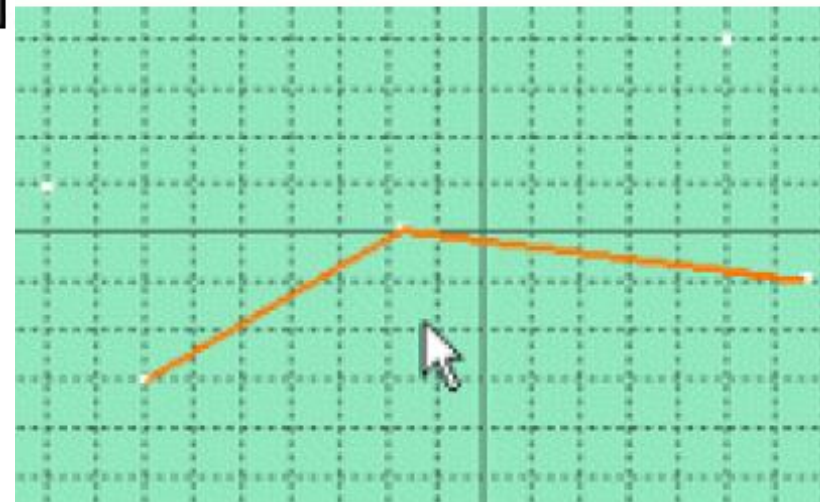
## Trimming Elements



First example



Second example

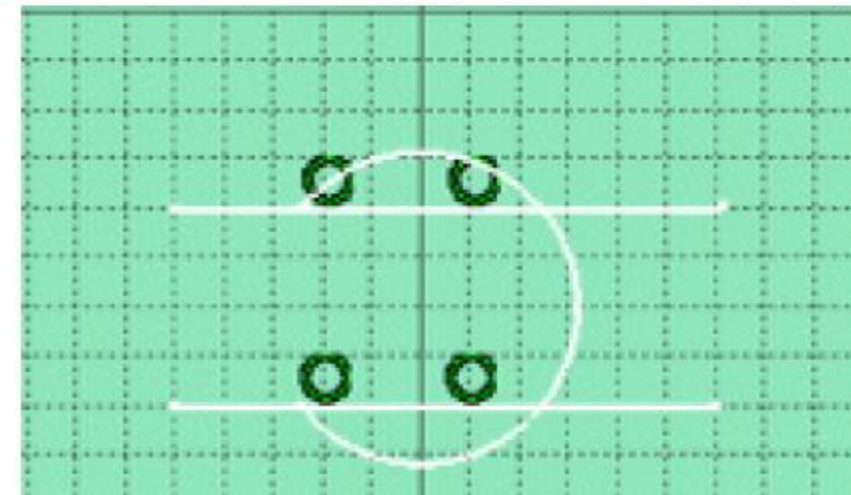
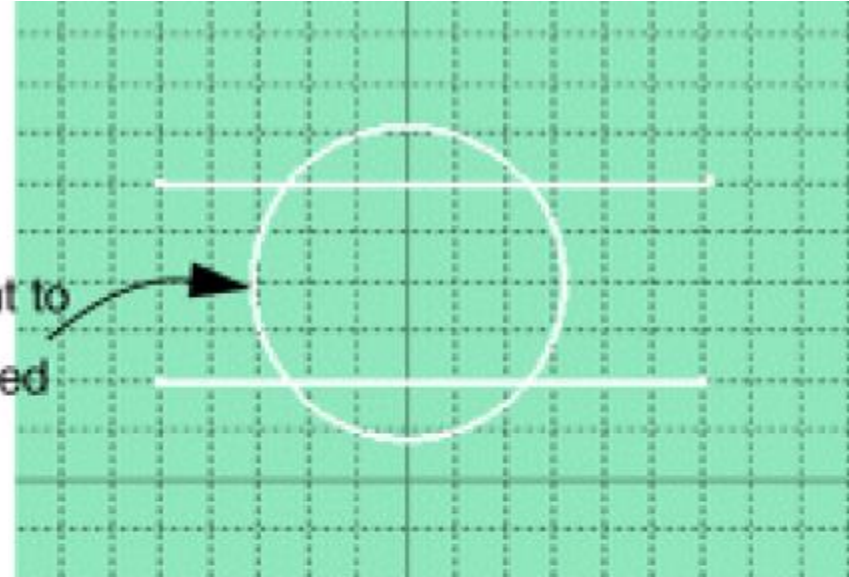




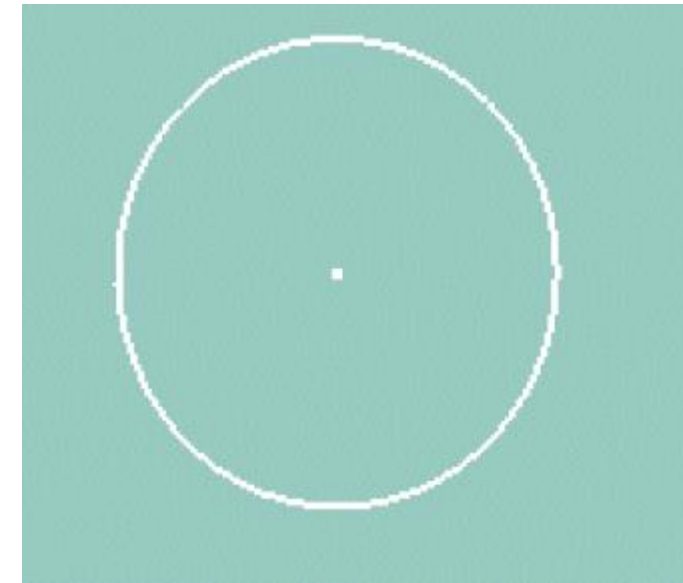
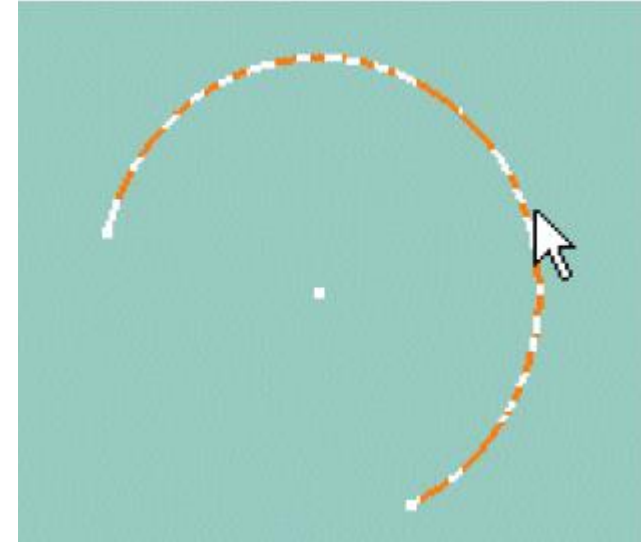
## Breaking and Trimming



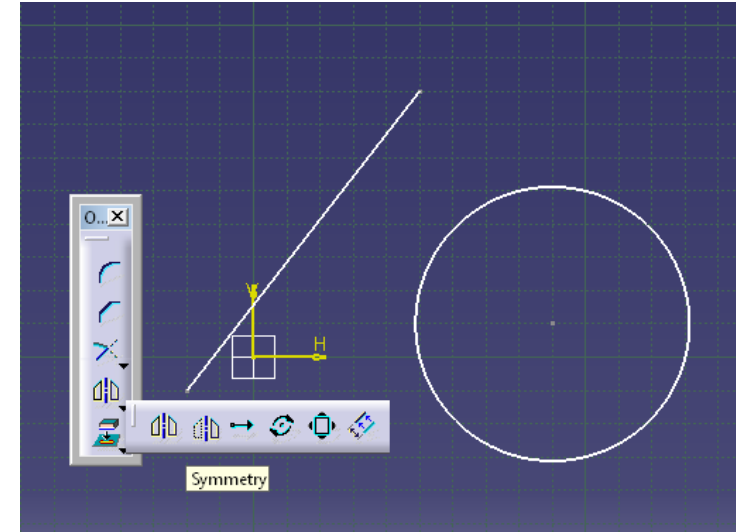
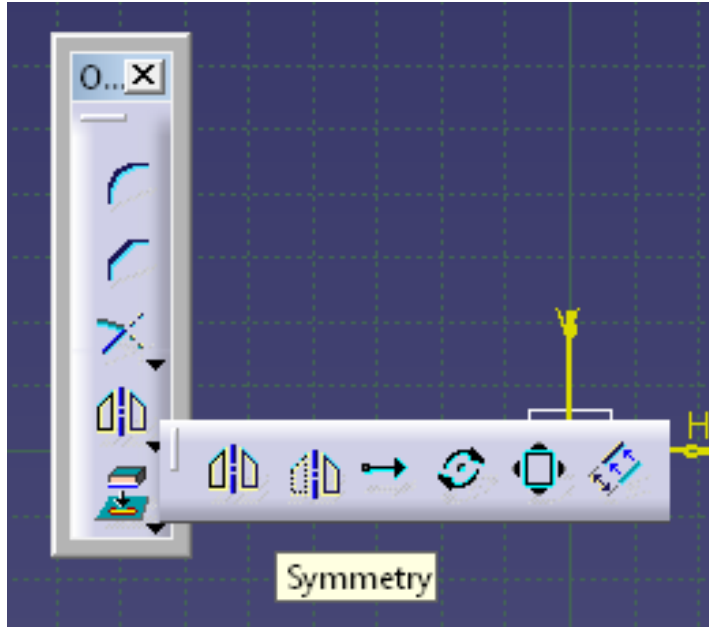
Segment to  
be deleted



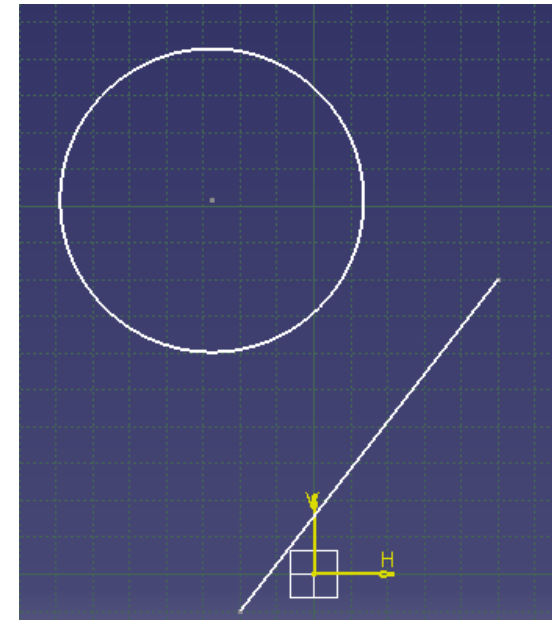
## Closing Elements



## Creating Symmetrical Elements

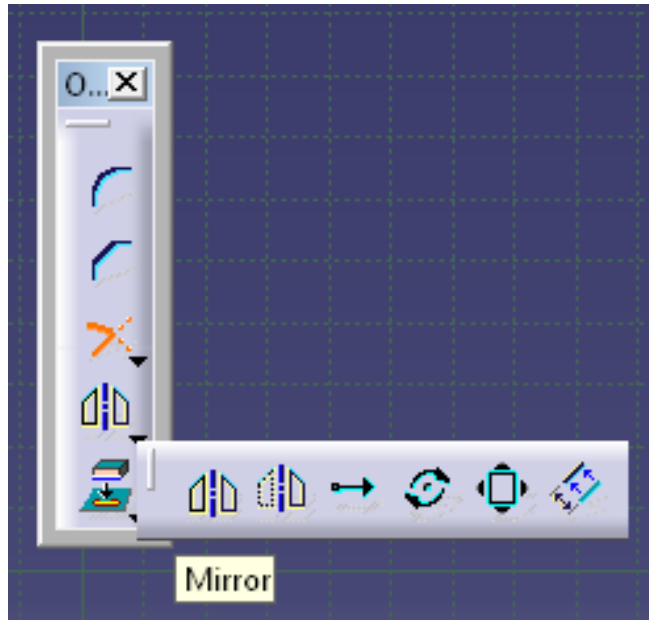


Symmetry

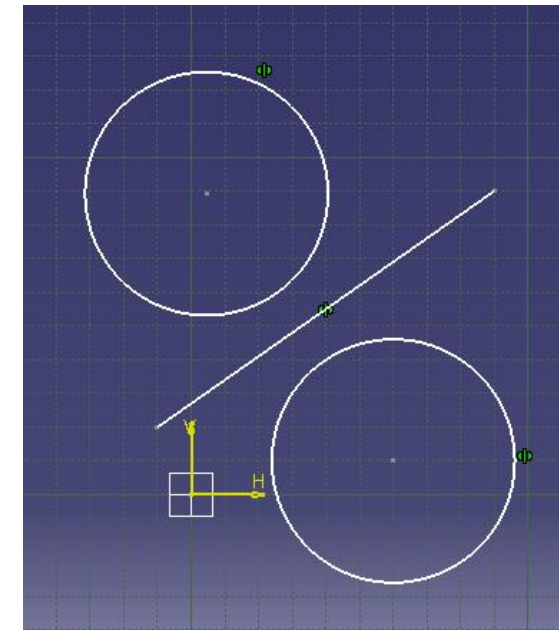
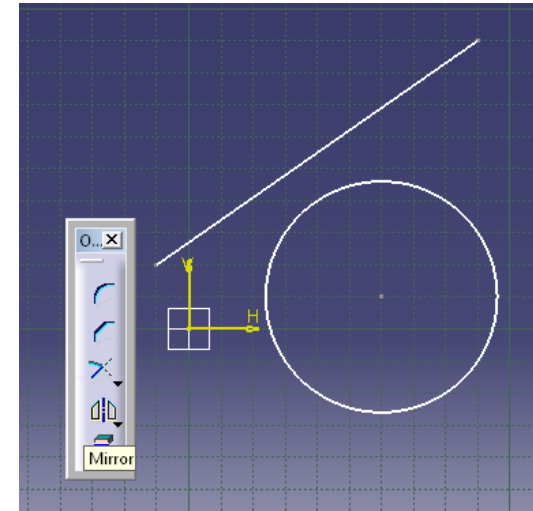




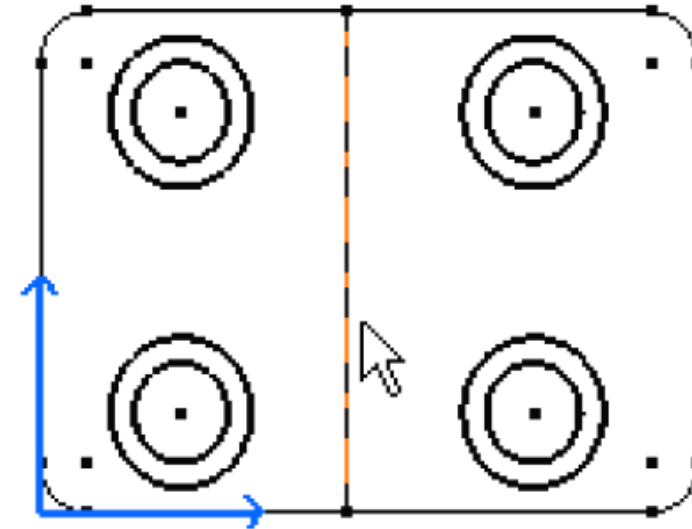
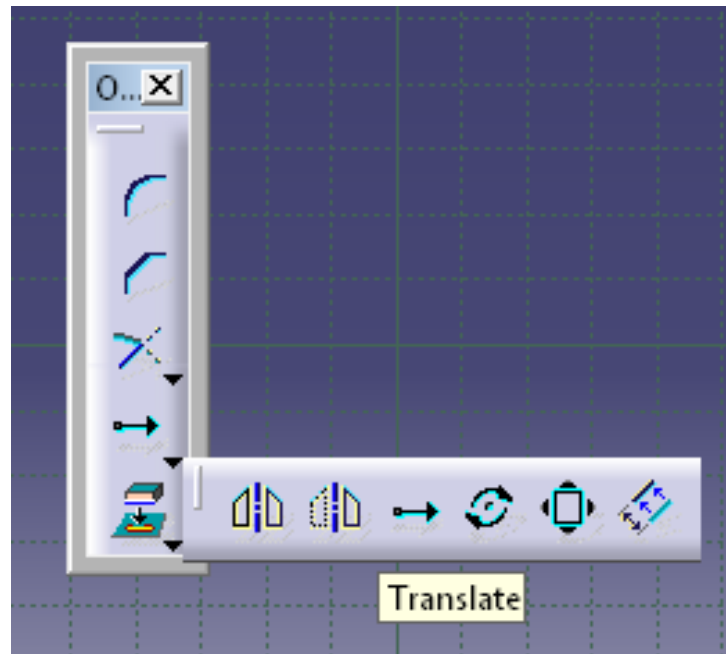
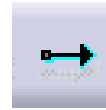
## Creating Mirror Elements



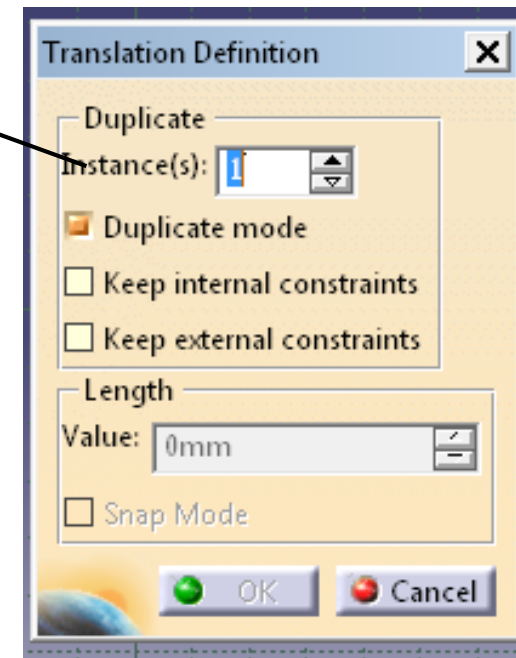
**Mirror**

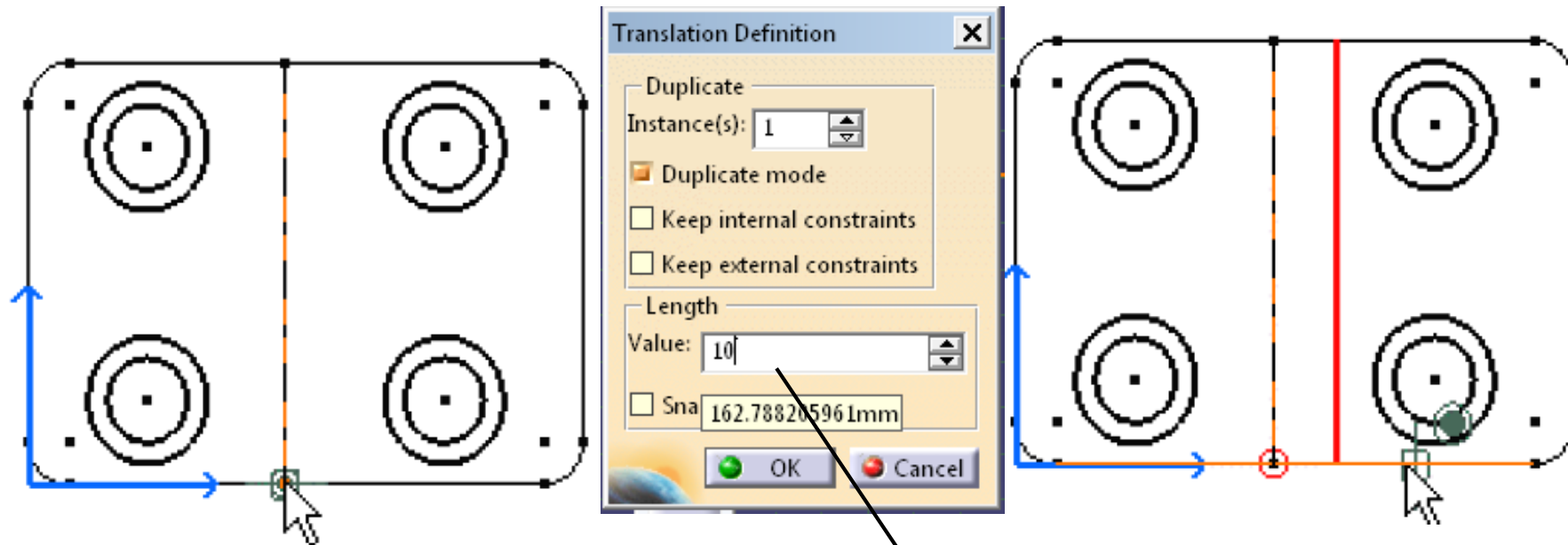
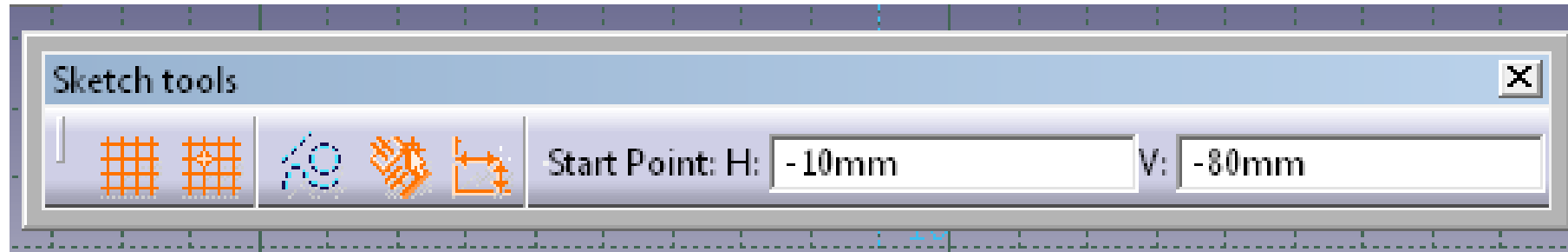


## Translating Elements



عدد النسخ



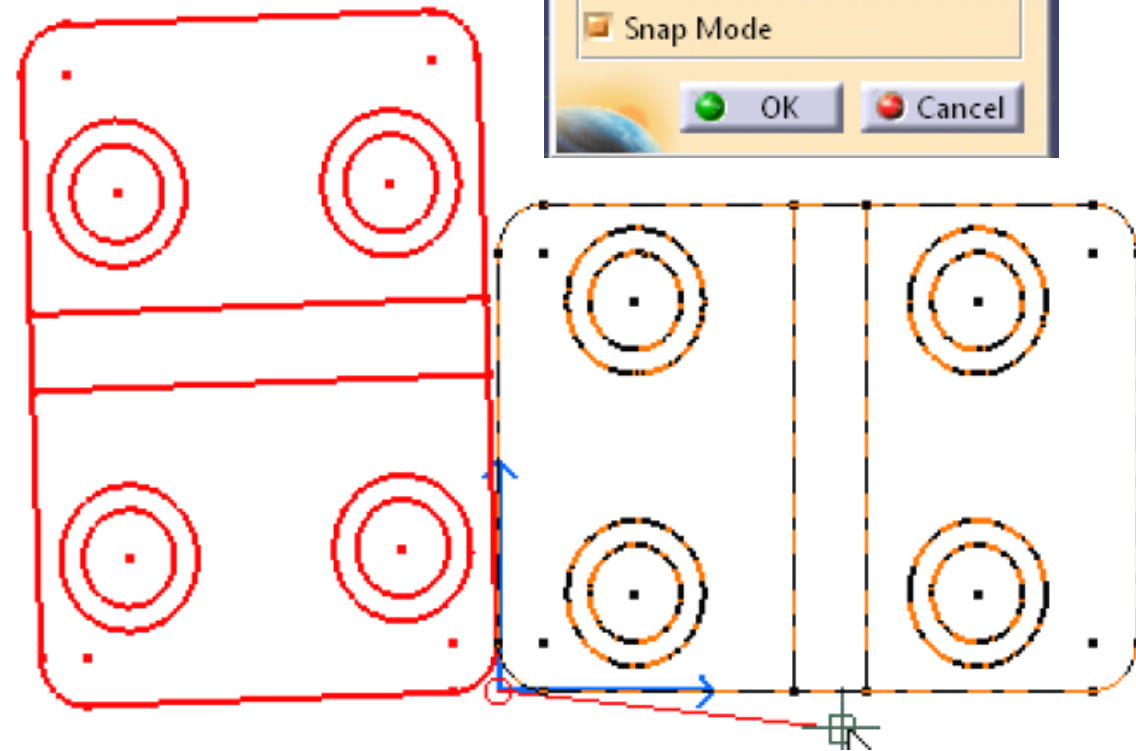
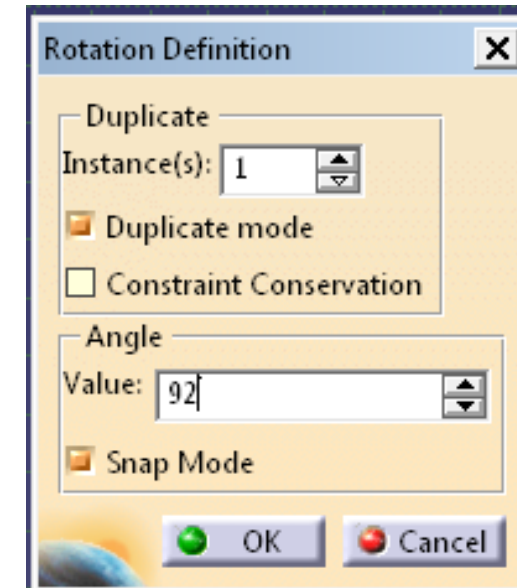
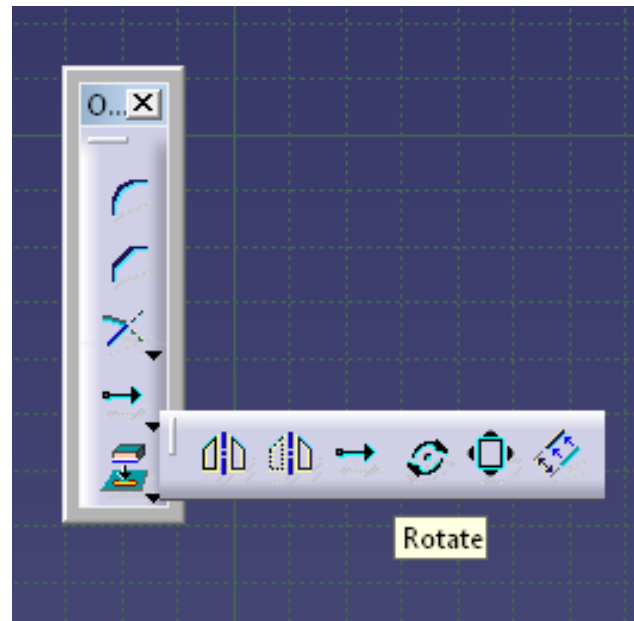


نقطة البداية

مسافة الانتقال



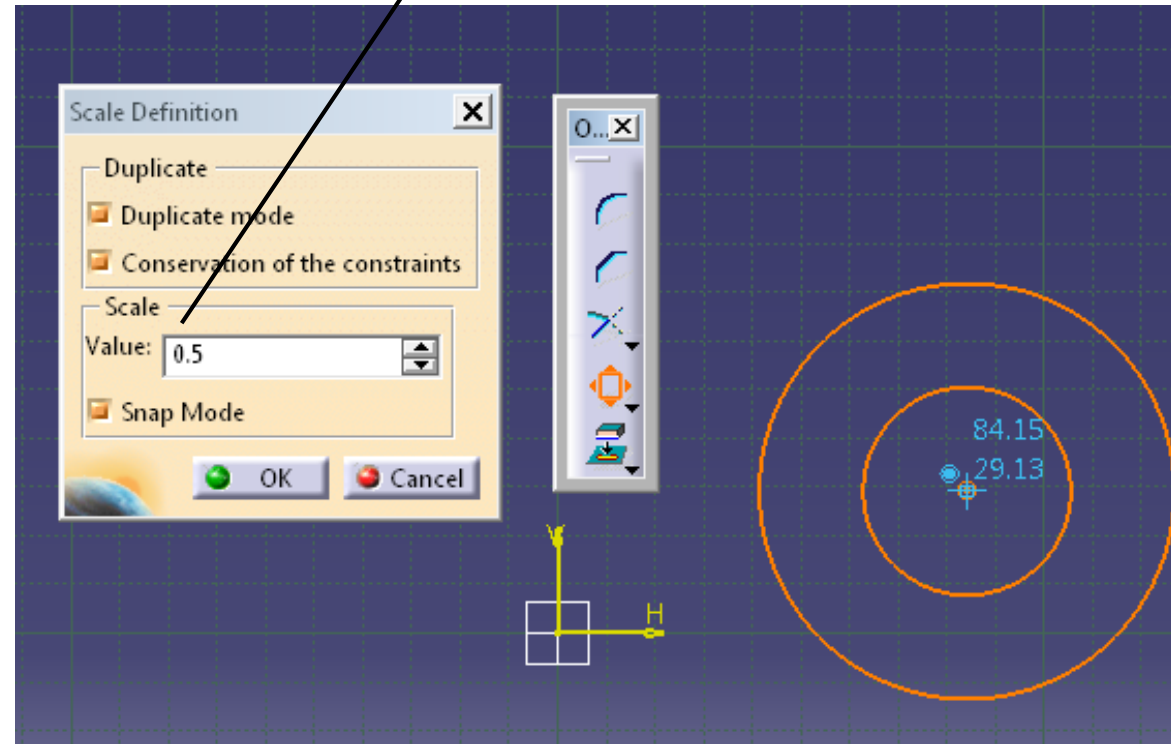
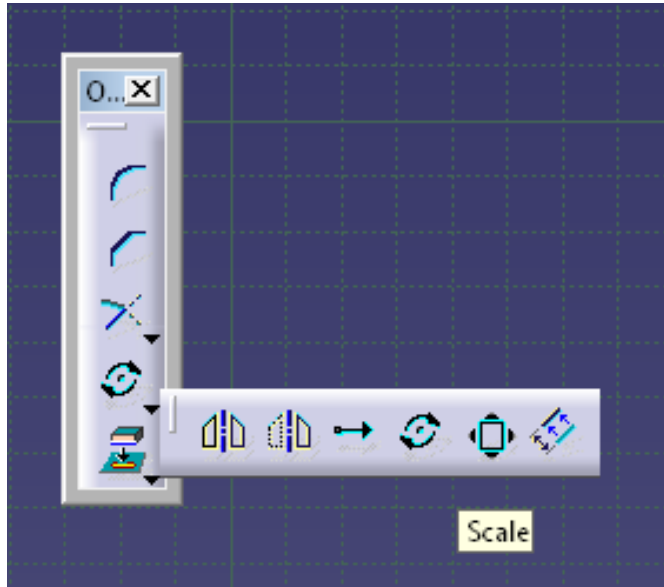
## Rotating Elements



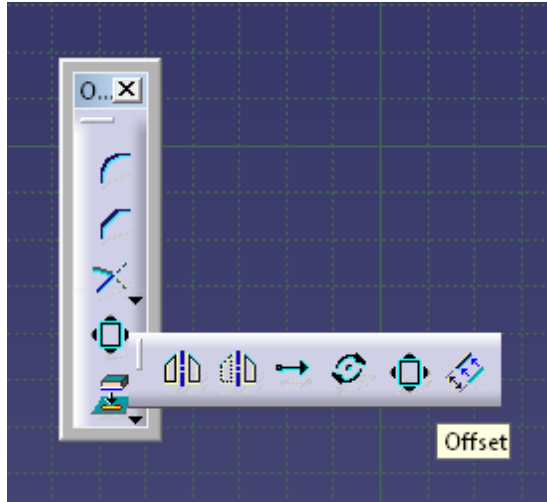
## Scaling Elements



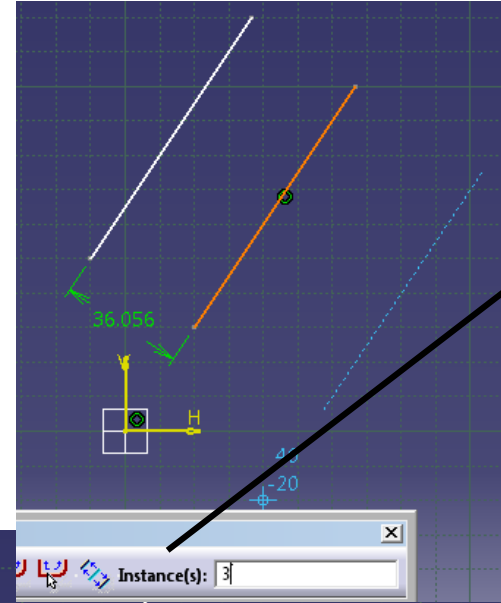
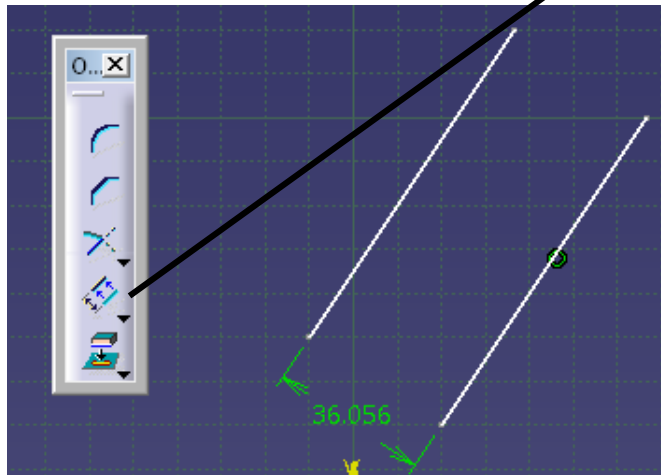
نسبة التكبير أو التصغير



## Offsetting Elements



offset



عدد النسخ

