

**College of A & D**

**Descriptive Drawing 1 - DES 102**

**Circles and tangents**

**(Lecture 04)**

**Dr. Sameer Alwattar**

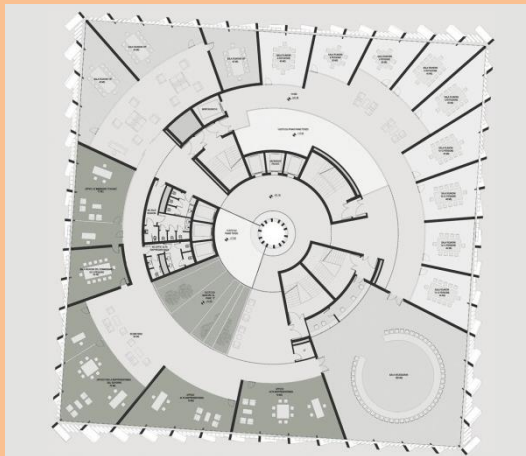
# Architectural Design



City Hall in Toronto, Canada



Aldar Headquarters Building - Abu Dhabi



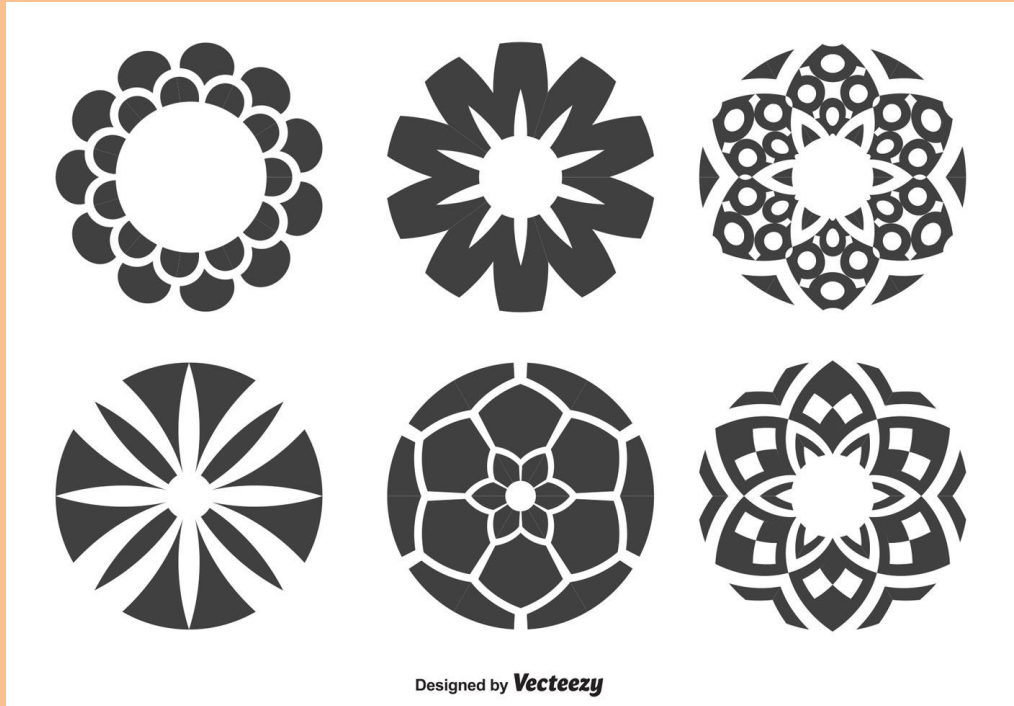
Sydney Opera

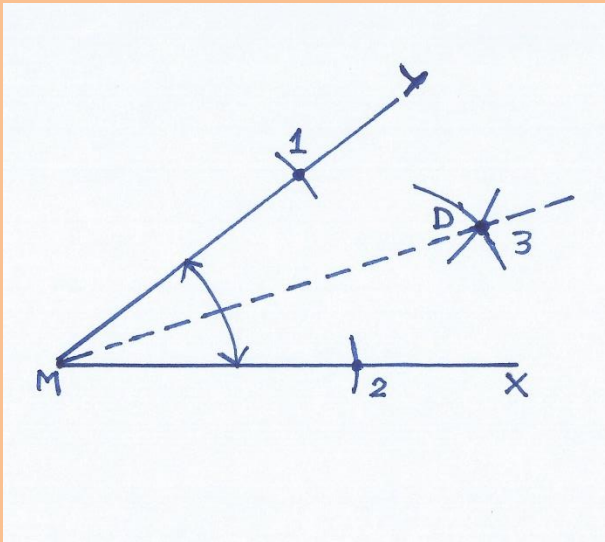
# Urban Design & Landscape



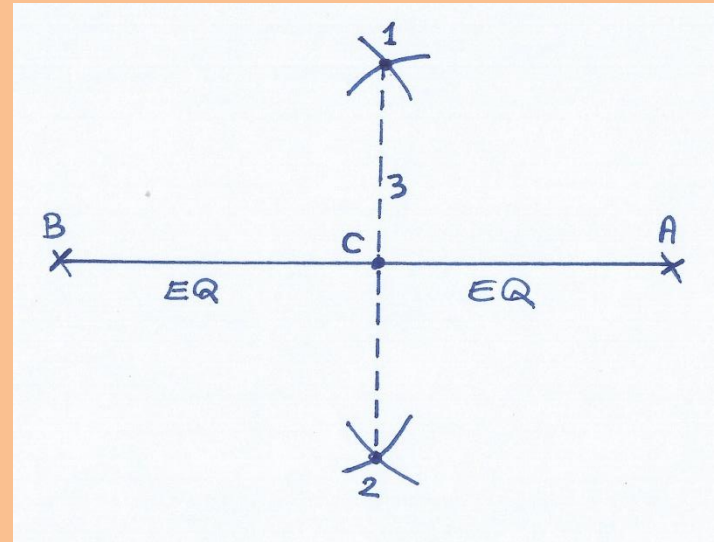


# Furniture & Decoration Design

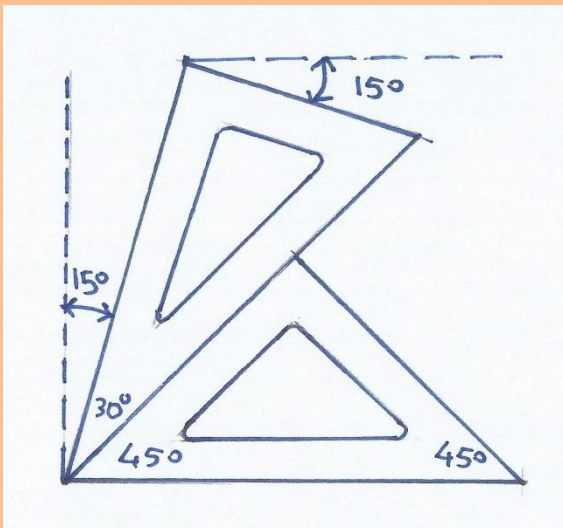




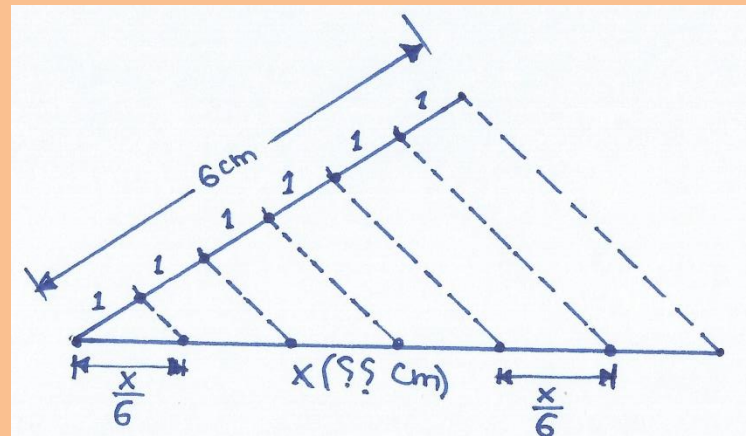
Dividing angle



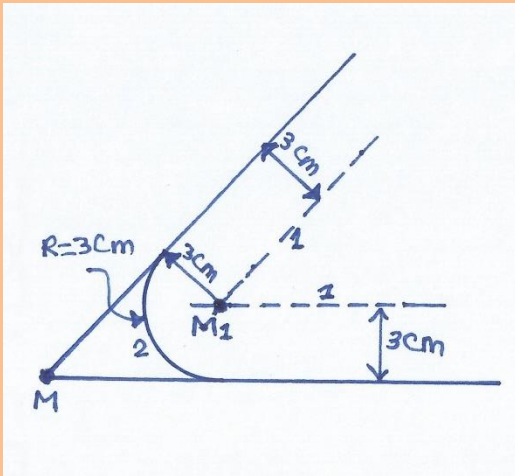
Dividing line



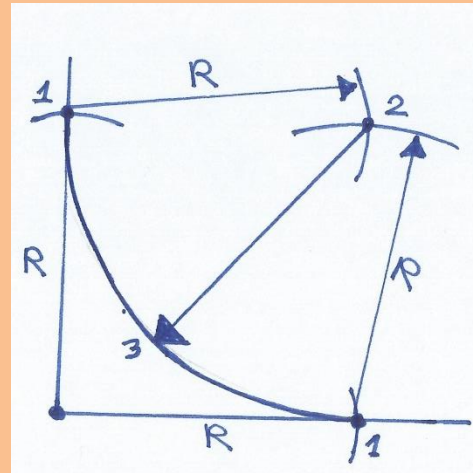
Drawing angle 15 °



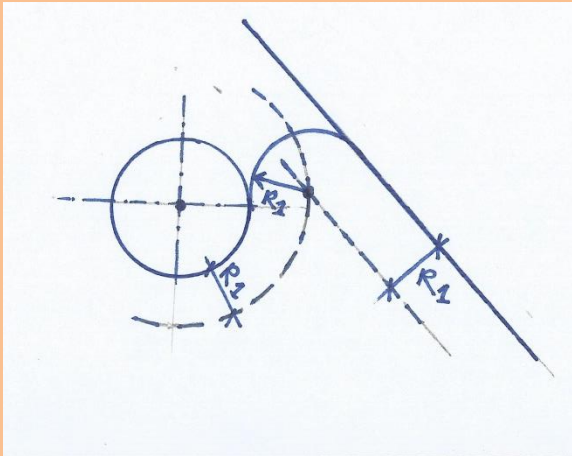
Divide the line into equal distances



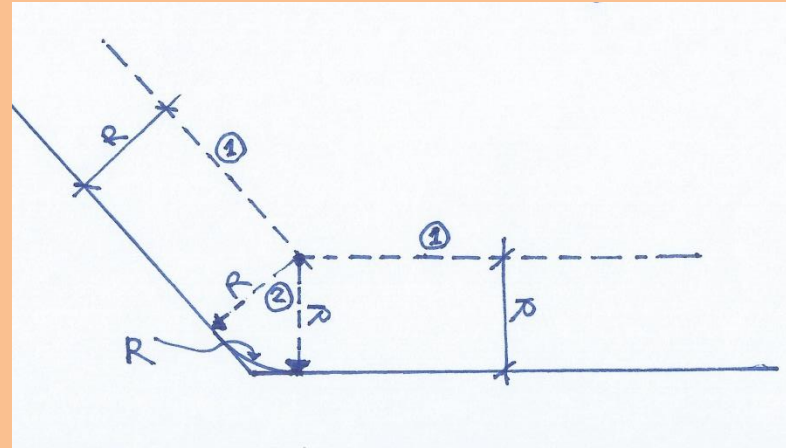
Draw an arc tangent sharp angle



Draw an arc tangent of the angle  $90^\circ$

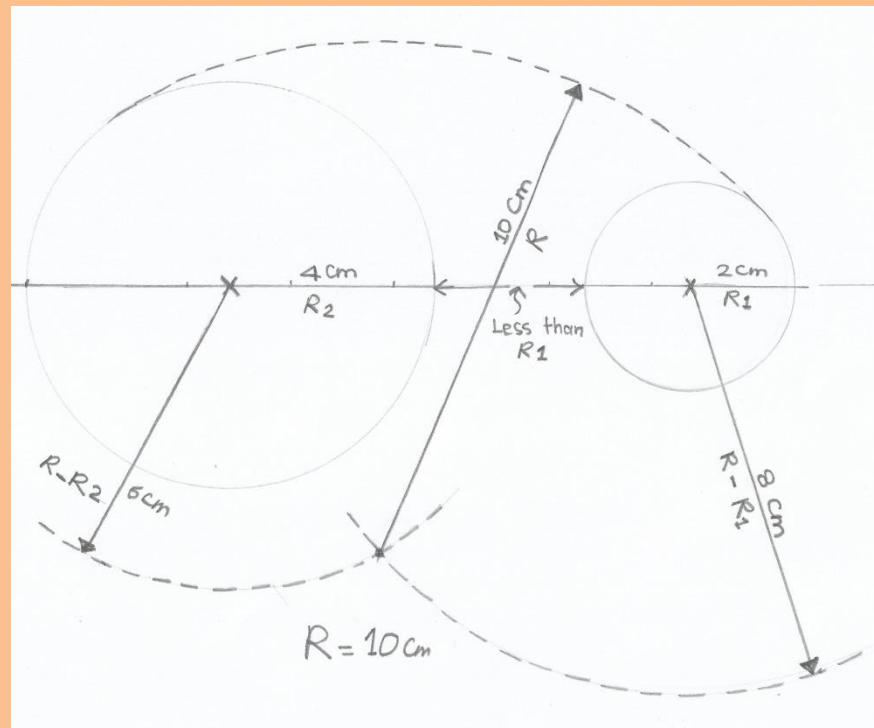


Draw an arc tangent to the circle and a straight line

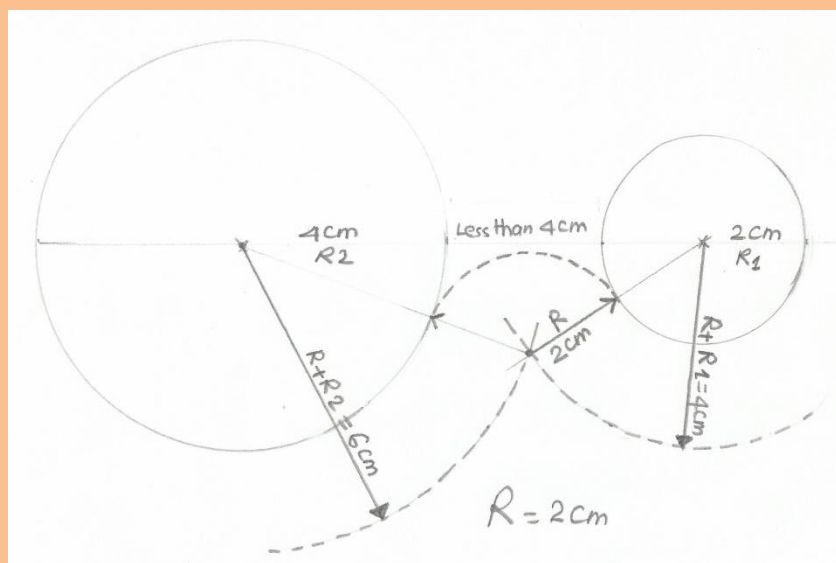


Draw an arc tangent of the angle obtuse

Draw an arc tangent to two circles (external)



Draw an arc tangent to two circles (internal)







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**Exercise: 04 (In Class):** On your A3 paper draw the following by **Tools**

