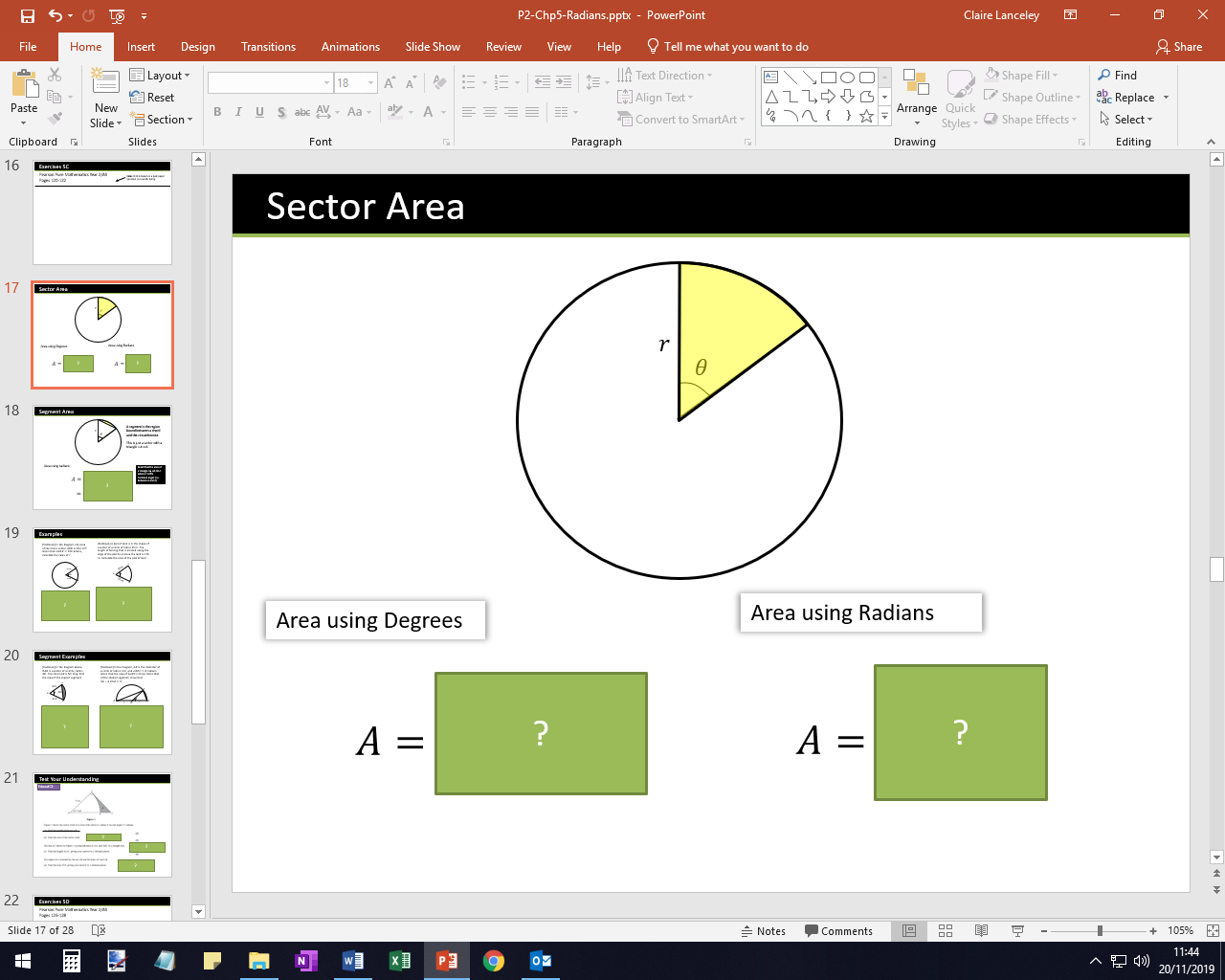
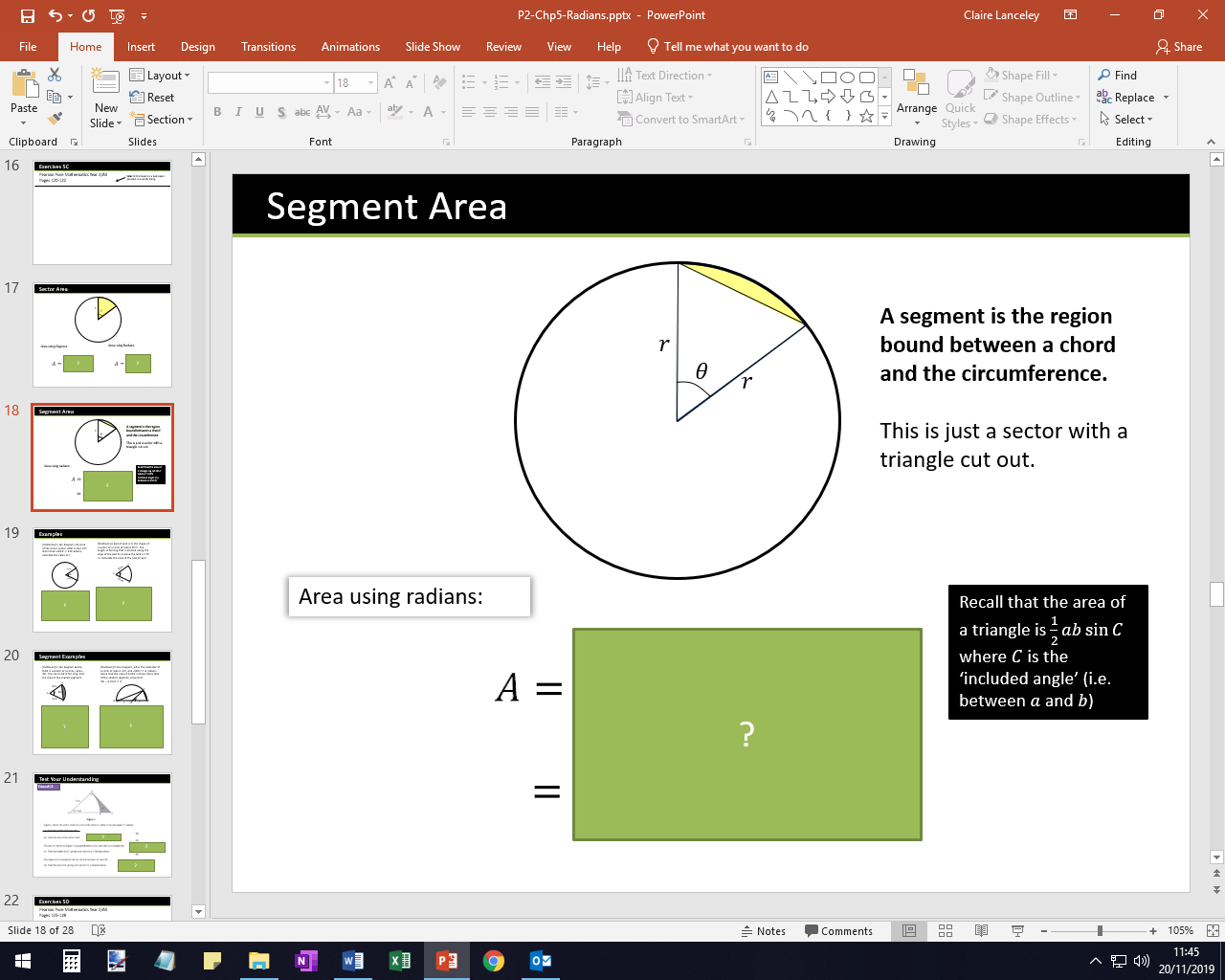
Sector Area

 Area using Degrees =

Area using Radians =

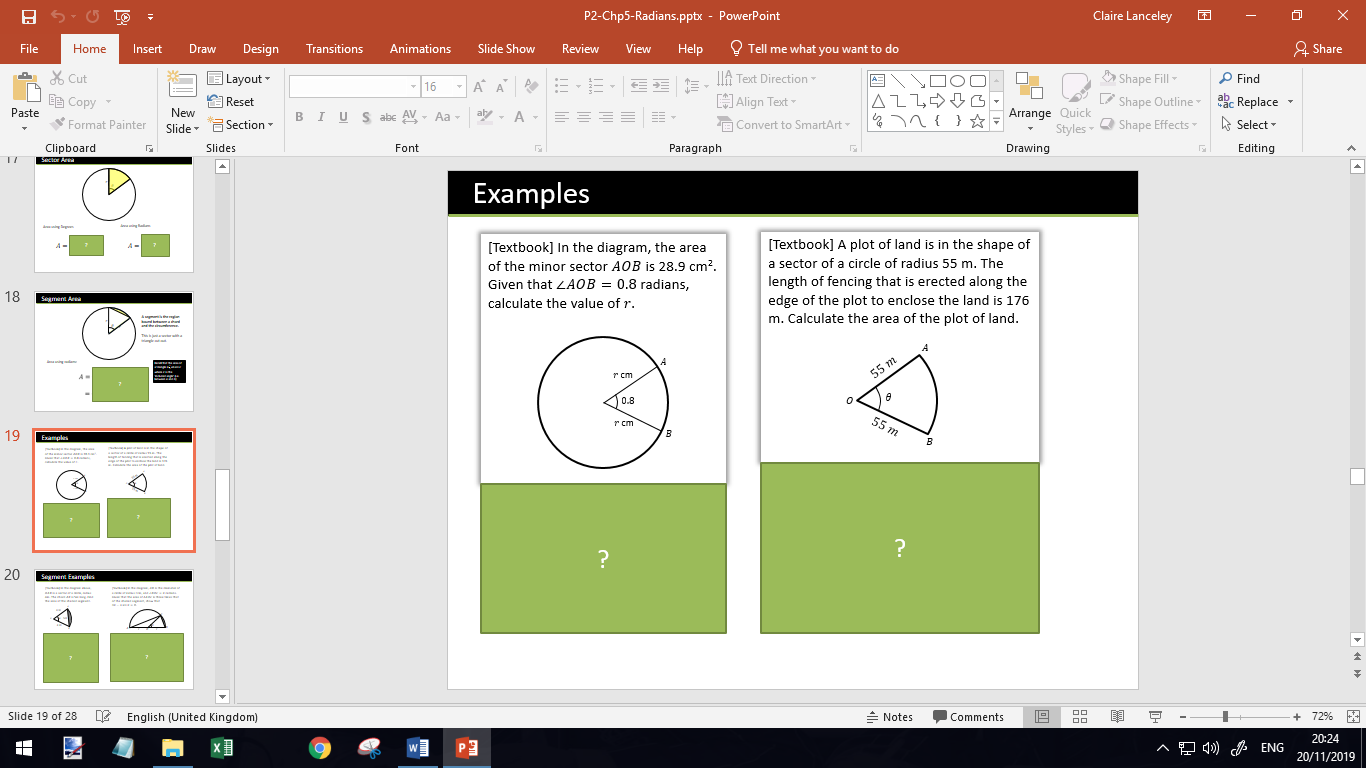
Segment Area

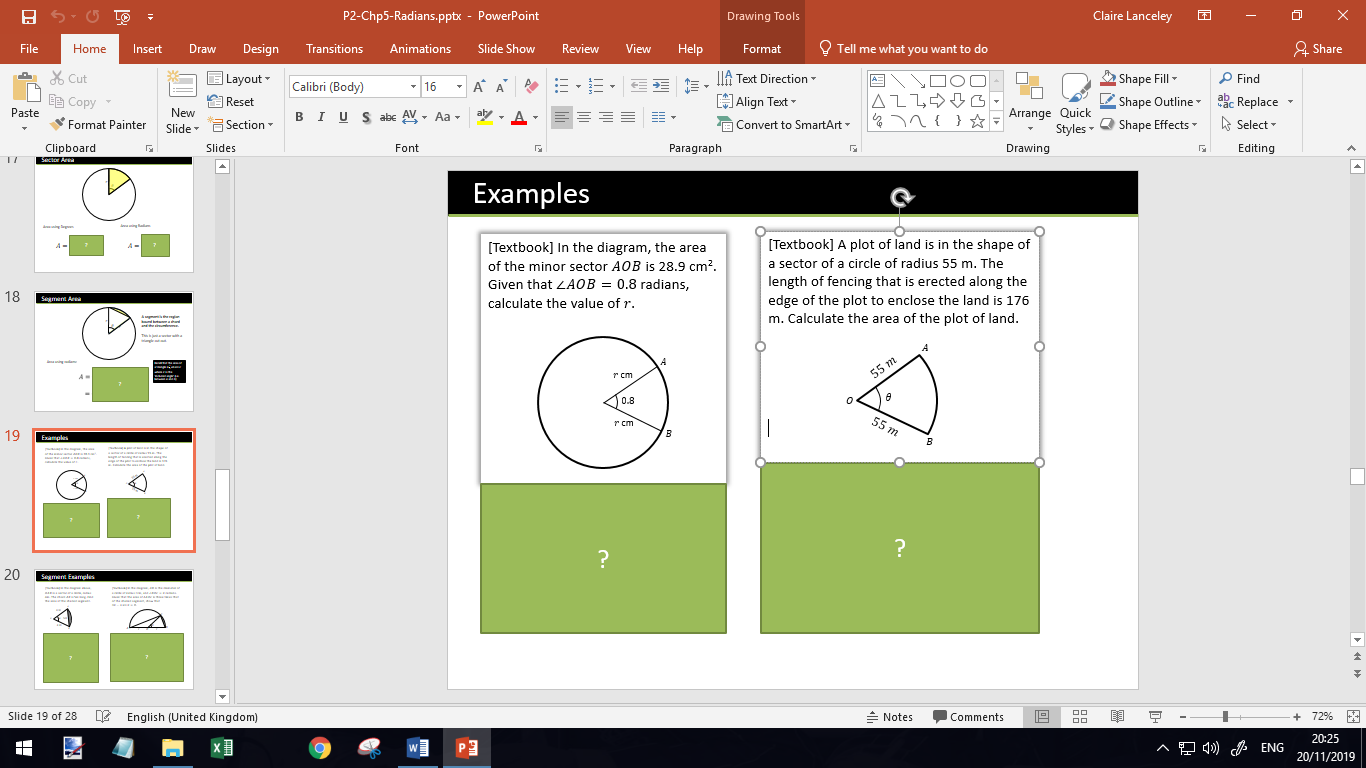


Recall that the area of a triangle is where is the ‘included angle’ (i.e. between and )

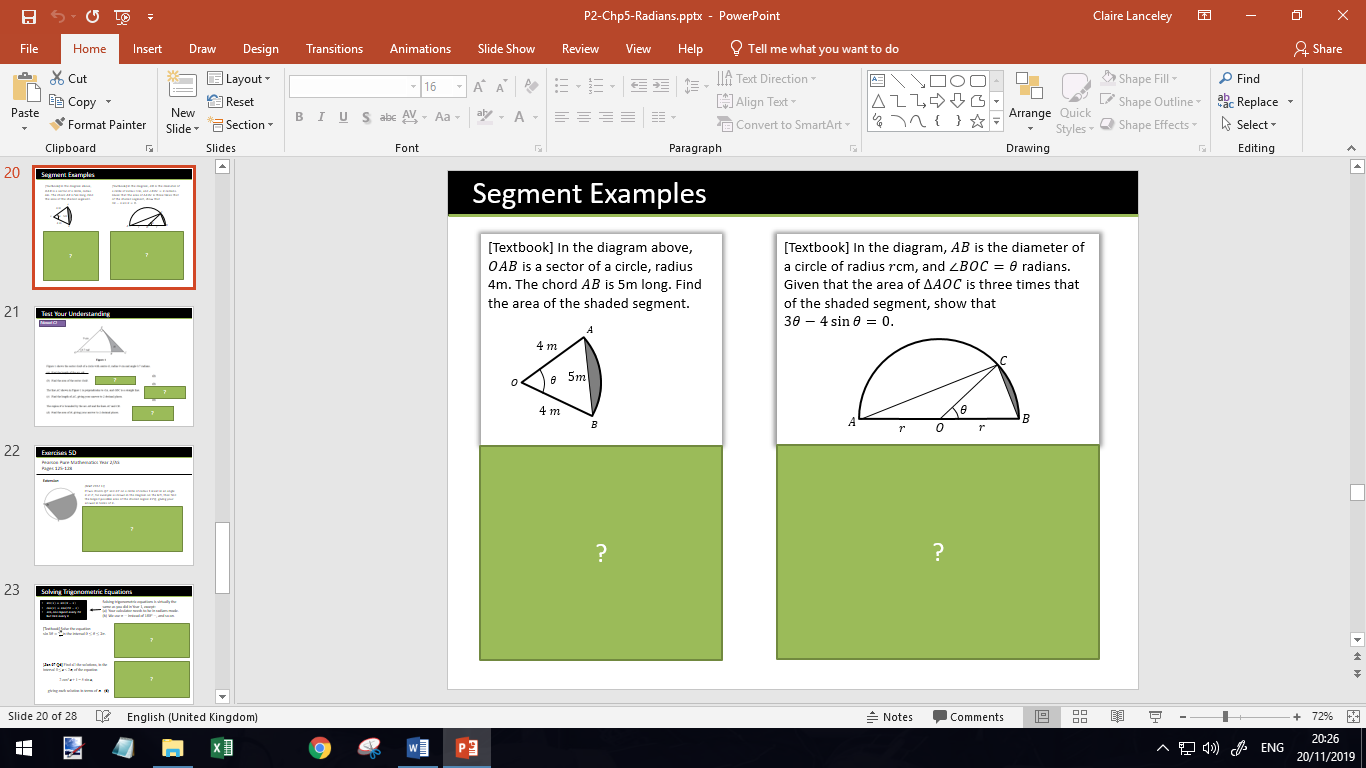
Area using radians:

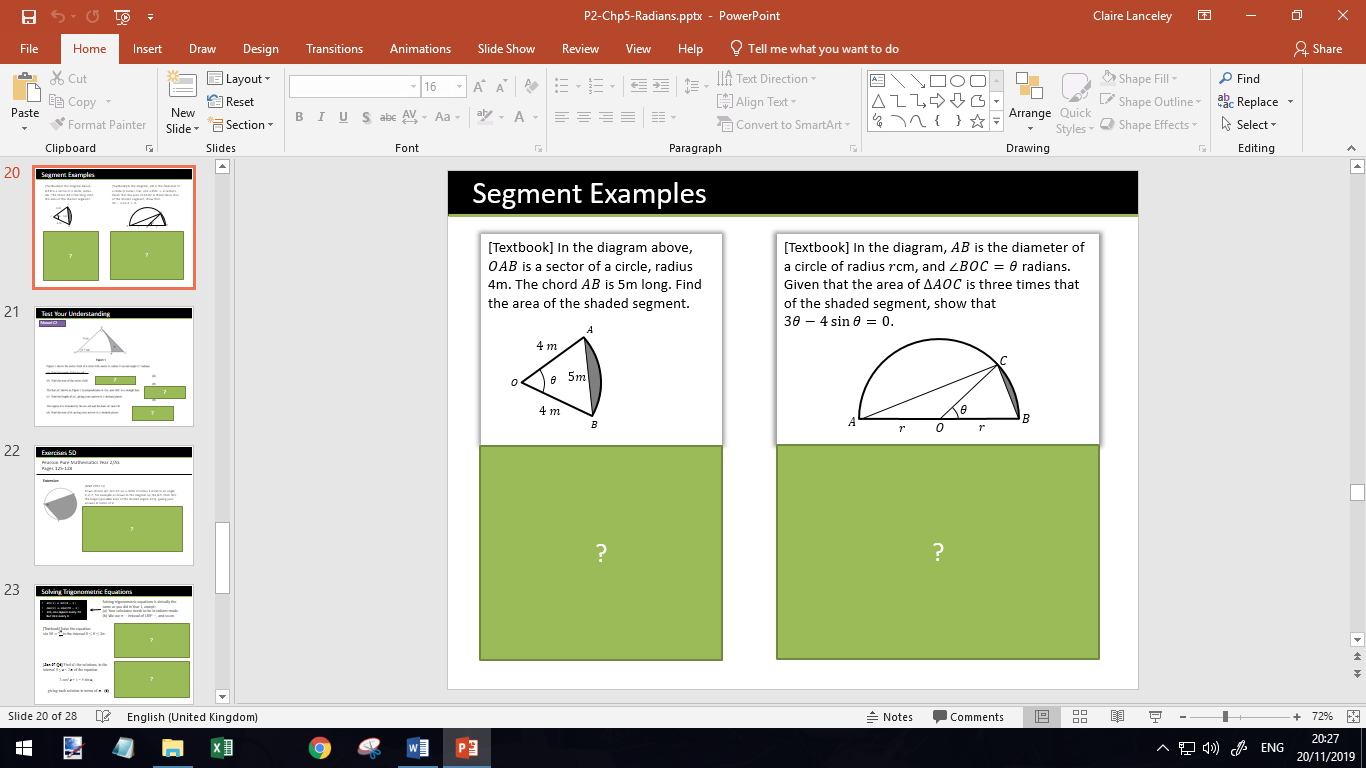
Examples

1. In the diagram, the area of the minor sector is 28.9 cm2. Given that radians, calculate the value of .
2. A plot of land is in the shape of a sector of a circle of radius 55 m. The length of fencing that is erected along the edge of the plot to enclose the land is 176 m. Calculate the area of the plot of land.

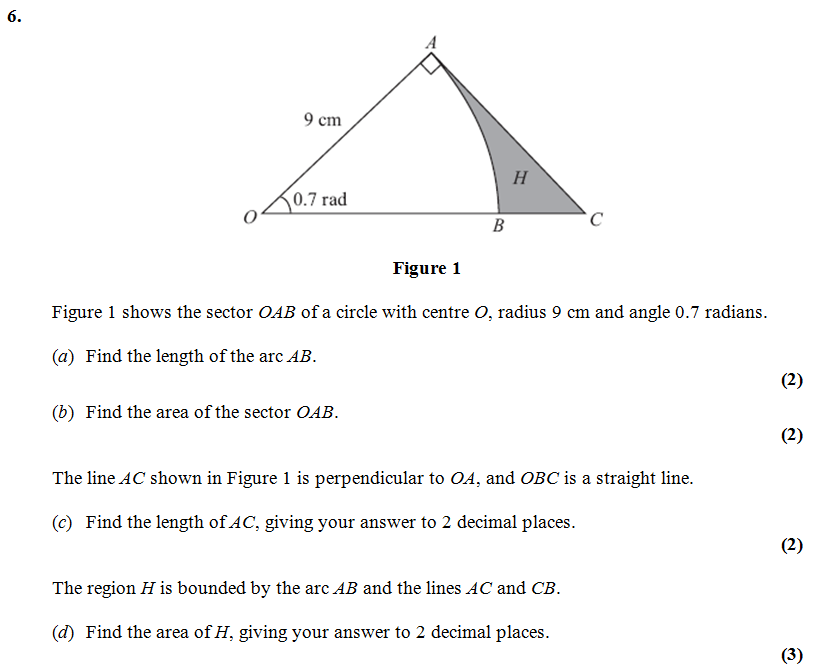


1. In the diagram above, is a sector of a circle, radius 4m. The chord is 5m long. Find the area of the shaded segment.



1. In the diagram, is the diameter of a circle of radius cm, and radians. Given that the area of is three times that of the shaded segment, show that   
   .

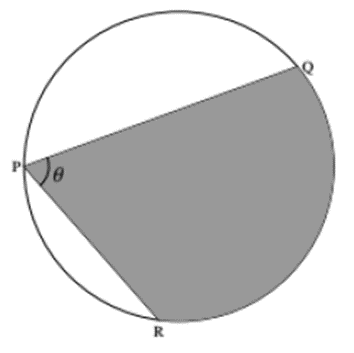
Test Your Understanding



Extension

*[MAT 2012 1J]*

If two chords and on a circle of radius 1 meet in an angle at , for example as drawn in the diagram on the left, then find the largest possible area of the shaded region , giving your answer in terms of .



Ex 5D Page 125 - 128