# Dr Oliver Mathematics Worked Examples <br> Circles and Sectors 1 

From: Edexcel 2020 June Paper 1H (Non-Calculator)

1. The diagram shows two shaded shapes, $\mathbf{A}$ and $\mathbf{B}$.

Shape $\mathbf{A}$ is formed by removing a sector of a circle with radius $(3 x-1) \mathrm{cm}$ from a sector of the circle with radius $(5 x-1) \mathrm{cm}$.
Shape $\mathbf{B}$ is a circle of diameter $(2-2 x) \mathrm{cm}$.


The area of shape $\mathbf{A}$ is equal to the area of shape $\mathbf{B}$.
Find the value of $x$.
You must show all your working.

