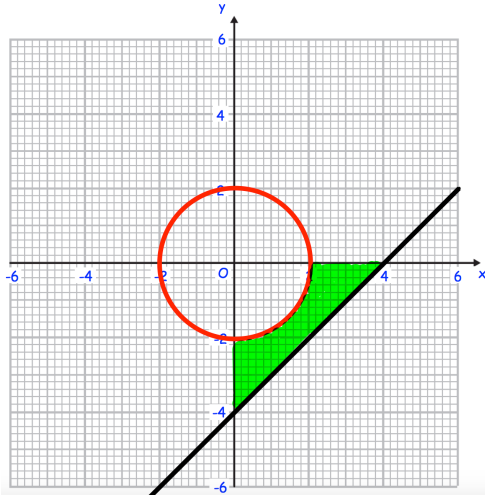


29th October

Corbettmaths

The circle below has equation
 $x^2 + y^2 = 4$

The line has equation $y = x - 4$



Find the area of the shaded region.

Describe fully the **single** transformation
 represented by $\begin{pmatrix} 4 & 0 \\ 0 & 4 \end{pmatrix}$

Work out the equation of the line of
 symmetry of the graph

$$y = 2x^2 + 6x + 5$$

The coefficient of x^2 in the expansion of
 $(2 + ax)^4$ is 384.

Find the possible values of a.