7 The diagram shows a square $A B C D$ with sides of length 20 cm . It also shows a semicircle and an arc of a circle.

$A B$ is the diameter of the semicircle.
$A C$ is an arc of a circle with centre $B$.

Show that $\frac{\text { area of shaded region }}{\text { area of square }}=\frac{\pi}{8}$

