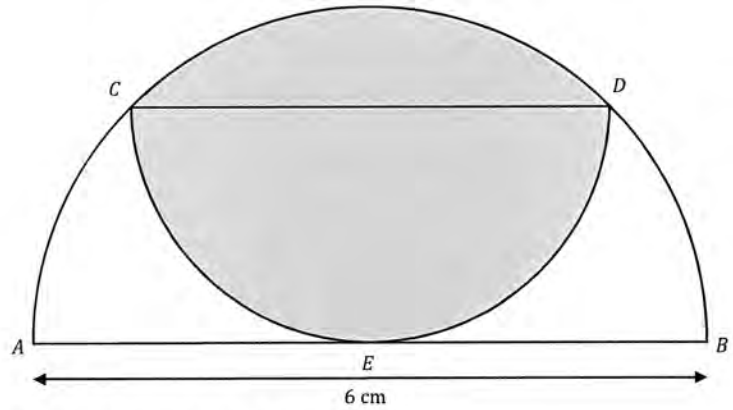
3



The diagram above is constructed as follows.

A semicircle with diameter AB of 6 cm is first drawn.

Then another semicircle is drawn, with its diameter CD parallel to AB

The semicircle with CD as its diameter is circumscribed by the semicircle with AB as its diameter, as shown in the figure.

Show that the area of the shaded region can be written as $\frac{9}{2}(\pi - 1)$ cm^2

[6 marks]