3.

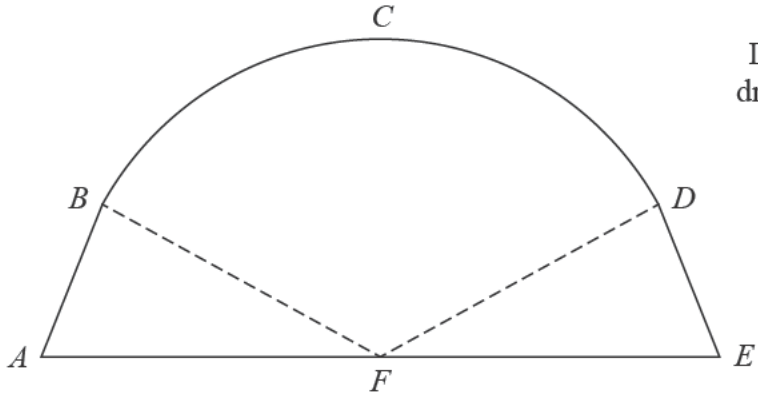

Diagram not drawn to scale

Figure 1

Figure 1 shows the plan view of a design for a stage at a concert.

The stage is modelled as a sector $BCDF$, of a circle centre F, joined to two congruent triangles ABF and EDF.

Given that

AFE is a straight line

$AF = FE = 10.7\,\text{m}$

$BF = FD = 9.2\,\text{m}$

angle $BFD = 1.82$ radians

find

(a) the perimeter of the stage, in metres, to one decimal place,

(5)

(b) the area of the stage, in m^2, to one decimal place.

(4)