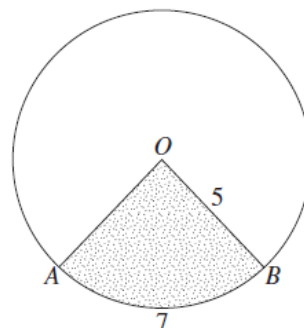




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- 2016 7** The circle centred at  $O$  has radius 5. Arc  $AB$  has length 7 as shown in the diagram. What is the area of the shaded sector  $OAB$ ? **1**

- (A)  $\frac{35}{2}$   
(B)  $\frac{35}{2} \pi$   
(C)  $\frac{125}{14}$   
(D)  $\frac{125}{14} \pi$



**A**

Use  $\ell = r\theta$ :

$$7 = 5\theta$$

$$\theta = \frac{7}{5}$$

Use  $A = \frac{1}{2}r^2\theta$ :

$$= \frac{1}{2} \times 5^2 \times \frac{7}{5}$$

$$= \frac{35}{2}$$

State Mean:  
**0.71**

\* These solutions have been provided by [projectmaths](#) and are not supplied or endorsed by BOSTES.