

1 A particle is following a circular path and is observed to have an angular displacement of  $10.3^\circ$ .

- (a) Express this angle in radians (rad). Show your working and give your answer to three significant figures.

$$\text{angle} = \dots \text{rad} \quad [2]$$

- (b) (i) Determine  $\tan 10.3^\circ$  to three significant figures.

$$\tan 10.3^\circ = \dots$$

- (ii) Hence calculate the percentage error that is made when the angle  $10.3^\circ$ , as measured in radians, is assumed to be equal to  $\tan 10.3^\circ$ .

$$\text{percentage error} = \dots \quad [3]$$