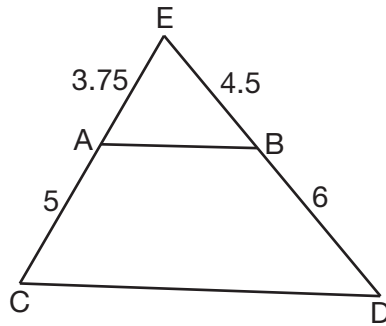


**26** Point  $P$  is on segment  $AB$  such that  $AP:PB$  is 4:5. If  $A$  has coordinates  $(4,2)$ , and  $B$  has coordinates  $(22,2)$ , determine and state the coordinates of  $P$ .

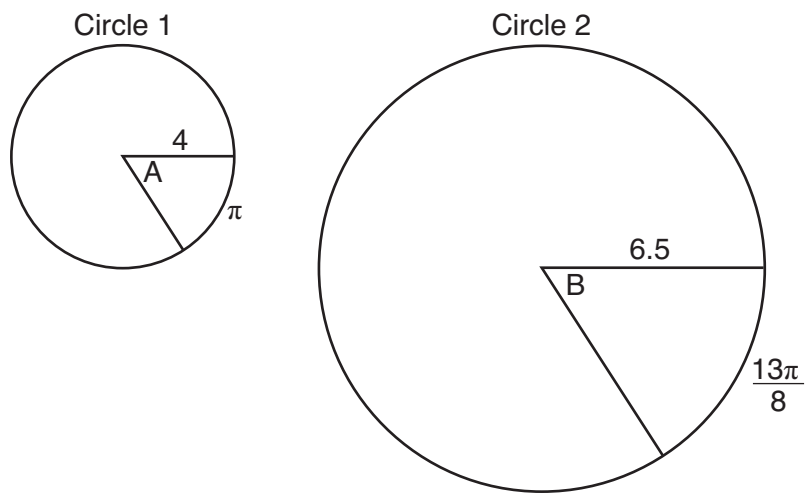
27 In  $\triangle CED$  as shown below, points  $A$  and  $B$  are located on sides  $\overline{CE}$  and  $\overline{ED}$ , respectively. Line segment  $AB$  is drawn such that  $AE = 3.75$ ,  $AC = 5$ ,  $EB = 4.5$ , and  $BD = 6$ .



Explain why  $\overline{AB}$  is parallel to  $\overline{CD}$ .

**28** Find the value of  $R$  that will make the equation  $\sin 73^\circ = \cos R$  true when  $0^\circ < R < 90^\circ$ .  
Explain your answer.

**29** In the diagram below, Circle 1 has radius 4, while Circle 2 has radius 6.5. Angle  $A$  intercepts an arc of length  $\pi$ , and angle  $B$  intercepts an arc of length  $\frac{13\pi}{8}$ .



Dominic thinks that angles  $A$  and  $B$  have the same radian measure. State whether Dominic is correct or not. Explain why.

**30** A ladder leans against a building. The top of the ladder touches the building 10 feet above the ground. The foot of the ladder is 4 feet from the building. Find, to the *nearest degree*, the angle that the ladder makes with the level ground.