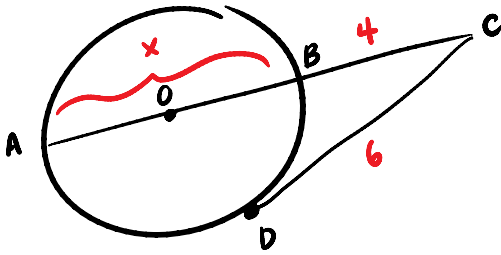


#13

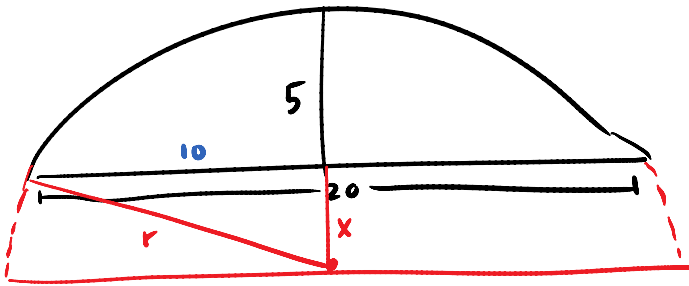


Find radius

$$\begin{aligned} 6^2 &= 4(4+x) \\ 36 &= 16+4x \\ 20 &= 4x \\ 5 &= x \end{aligned}$$

radius = 2.5

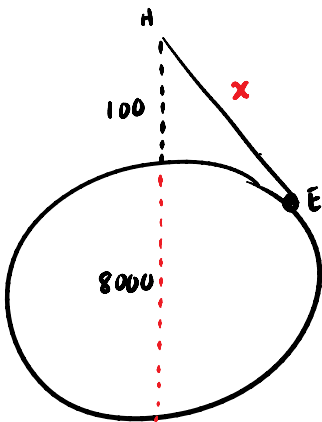
#14 Find radius



$$\begin{aligned} x^2 + 10^2 &= r^2 \rightarrow r = 5+x \\ x^2 + 10^2 &= (5+x)^2 \\ x^2 + 100 &= 25 + 10x + x^2 \\ 75 &= 10x \\ 7.5 &= x \end{aligned}$$

Radius = 5 + 7.5 = **12.5**

#15

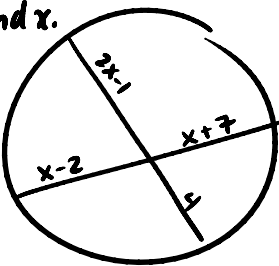


$$\begin{aligned} x^2 &= 100(8100) \\ x^2 &= 810,000 \\ x &= 900 \end{aligned}$$

900 mi

#16

Find x.



$$\begin{aligned} (x-2)(x+7) &= 4(2x-1) \\ x^2 + 7x - 2x - 14 &= 8x - 4 \\ x^2 + 5x - 14 &= 8x - 4 \\ x^2 - 3x - 10 &= 0 \\ (x-5)(x+2) &= 0 \\ x &= 5, -2 \end{aligned}$$

