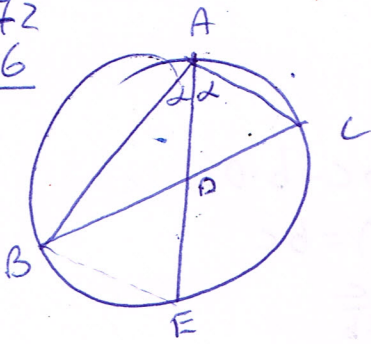


2.72
6



$R \rightarrow$ רדיוס המעגל
 $a \rightarrow$ אורך הצלע BC

$$\frac{BC}{\sin \alpha} = 2R \rightarrow \boxed{\frac{a}{2 \sin \alpha} = R}$$

במקרה זה $\triangle ABE$ ישר זווית

$$\frac{BE}{\sin \alpha} = 2R \rightarrow \boxed{BE = 2R \sin \alpha = \frac{2a \sin \alpha}{2 \sin \alpha} = \frac{a}{\sin \alpha}}$$

$$\frac{BD}{DC} = \frac{AB}{AC} = \frac{c}{b}$$

כלומר $BD = x$

$$\frac{x}{a-x} = \frac{c}{b}$$

כלומר $BD = x$

$$xb = ac - xc$$

$$x(b+c) = ac \rightarrow x = \boxed{\frac{ac}{b+c} = BD}$$

$$\boxed{DC = a - x = a - \frac{ac}{b+c} = \frac{ab}{b+c}}$$

(ש) $\triangle ADC \sim \triangle BDE$

$$DE = \frac{DC \cdot BE}{AC} \leftarrow \frac{DE}{DC} = \frac{BE}{AC}$$

$$DE = \frac{\frac{ab}{b+c} \cdot \frac{a}{\sin \alpha}}{b} = \frac{a^2}{2b \sin \alpha (b+c)}$$

