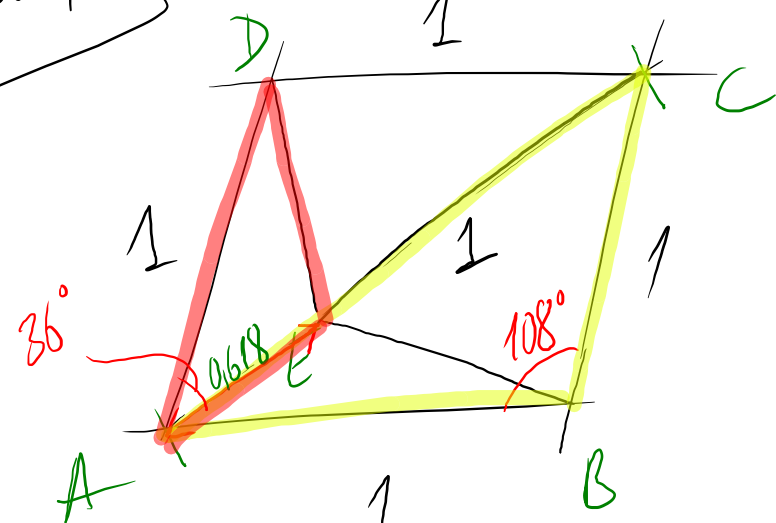


EX 4

2014



b) $ED = ?$ $EA = ?$

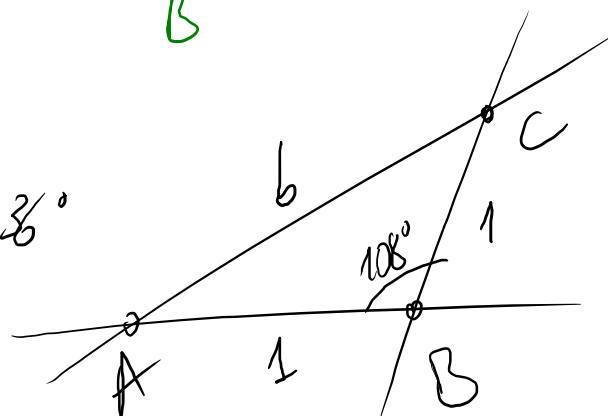
$$EA = AC - 1$$

$$ED^2 = 1^2 + 0.618^2 - 2 \cdot 1 \cdot 0.618 \cdot \cos 36^\circ$$

$$ED^2 \approx 0.381966$$

$$ED \approx 0.618 \Rightarrow AC \approx 1.618$$

$$\Rightarrow EA \approx 1.618 - 1 = 0.618$$



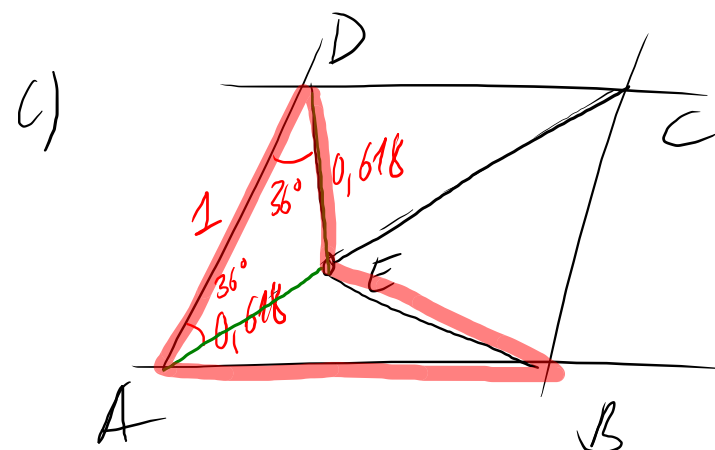
$$b^2 = 1^2 + 1^2 - 2 \cdot 1 \cdot 1 \cdot \cos(108^\circ)$$

$$= 2 - (2 \cdot \cos 108^\circ)$$

$$-0.618034$$

$$b^2 \approx 2.618034$$

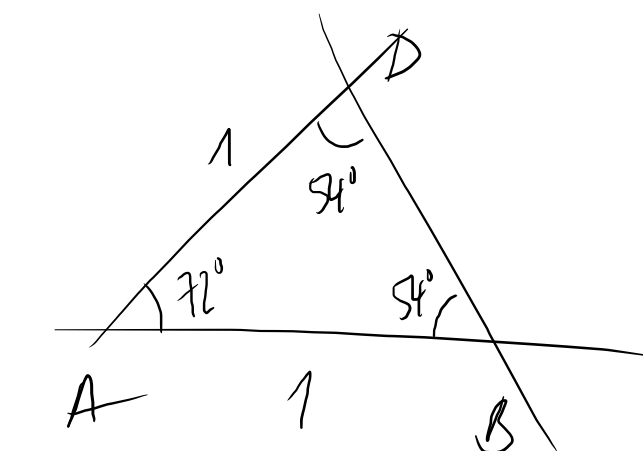
$$b \approx 1.618034 \approx 1.62 \approx 1.6$$



$$\widehat{ADE} = 36^\circ$$

$$2) AC \approx 1.618$$

$$\frac{BD}{\sin 72^\circ} = \frac{1}{\sin 54^\circ}$$



$$\Rightarrow BD = \frac{\sin 72^\circ}{\sin 54^\circ} \approx 1.18$$

$$d) 2 \cdot \frac{1}{2} \cdot 0.618 \cdot 1 \cdot \sin 36^\circ$$

$$\approx 0.618 \cdot \sin 36^\circ$$

$$\approx 0.36 \text{ cm}^2$$