$$y^2 = x^5 - 4 \qquad \text{mod } 11$$

$$x^5 \to \pm 1$$

$$a^{10} \equiv 1$$

$$a^{10} - 1 \equiv 0$$

K-esime

$$(a^5 - 1)(a^5 + 1)$$

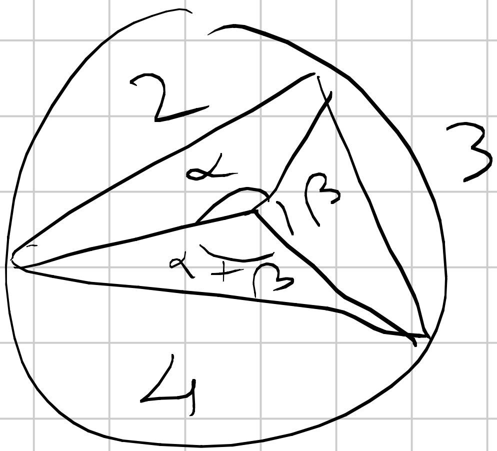
$$\equiv 1 \pmod{k}$$

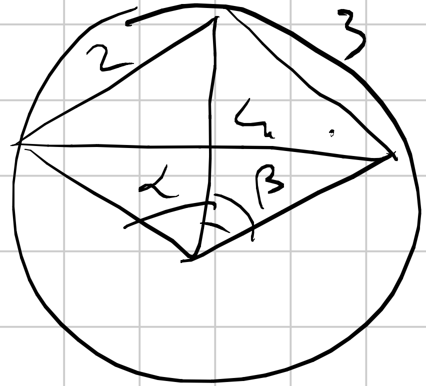
$$a^5 \equiv \pm 1$$

$$\sum_{x=0}^{90^\circ} \sin^2 x \qquad \sin^2 x + \sin^2(90 - x) = 1$$

$$45 + \left(\frac{1}{\sqrt{2}}\right)^2 = 45 + \frac{1}{2}$$

4)





$$2^2 = 4^2 + 3^2 - 24\cos\frac{\alpha}{2}$$

$$\cos\frac{\alpha}{2} = \frac{16+9-4}{24} = \frac{21}{24} = \frac{7}{8}$$

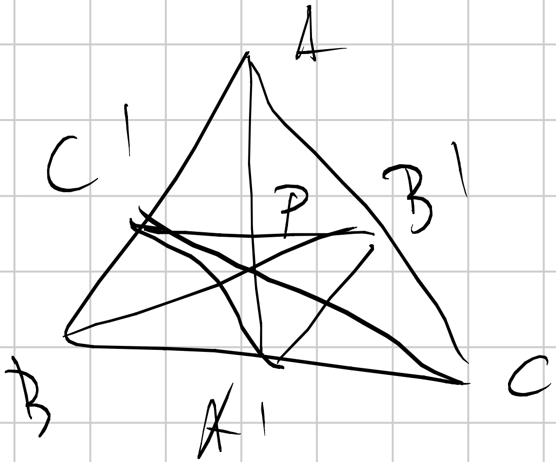
$$\cos\alpha = 2\left(\frac{7}{8}\right)^2 - 1 =$$

7) $\operatorname{tg}(1) = \operatorname{tg}(n+1-n) = \dfrac{\operatorname{tg}(n+1) - \operatorname{tg}(n)}{1 + \operatorname{tg}(n)\operatorname{tg}(n+1)}$

$$\sum_{n=0}^{2002} \operatorname{tg}(n)\operatorname{tg}(n+1) = \frac{\operatorname{tg}(n+1) - \operatorname{tg}(n)}{\operatorname{tg}(1)} - 1$$

$$= -2002 + \frac{1}{\operatorname{tg}(1)}\left(\cancel{\operatorname{tg}(1)} - \operatorname{tg}(0) + \cancel{\operatorname{tg}(2)} - \cancel{\operatorname{tg}(1)} + \ldots + \operatorname{tg}(2003) - \operatorname{tg}(2002)\right)$$

$$= -2002 + \frac{\operatorname{tg}(2003)}{\operatorname{tg}(1)}$$



Concorrono $\Longleftrightarrow \dfrac{AB' \cdot CA' \cdot BC'}{B'C \cdot A'B \cdot C'A} = 1$

$$S = \frac{AB \cdot BC \cdot CA}{4R}$$

$$S' = S - \frac{1}{2} AC' \cdot AB' \sin \hat{A} - \frac{1}{2} CB' \cdot CA' \cdot \sin \hat{C}$$

$$- \frac{1}{2} BA' \cdot BC' \sin \hat{B}$$

$$2R \cdot S' = \cancel{2R}\left(\overset{\frac{AB \cdot BC \cdot CA}{2}}{\cancel{S}} - \frac{1}{2} AC' \cdot AB' \frac{BC}{\cancel{2R}} - \frac{1}{2} CB' \cdot CA' \cdot \frac{AB}{\cancel{2R}} - \right.$$

$$\left. - \frac{1}{2} BA' \cdot BC' \cdot \frac{AC}{\cancel{2R}} \right) \overset{?}{=} AB' \cdot BC' \cdot CA'$$

$B'C \cdot A'B \cdot C'A \Longleftrightarrow$

$\shortparallel$

$AB' \cdot BC' \cdot CA'$