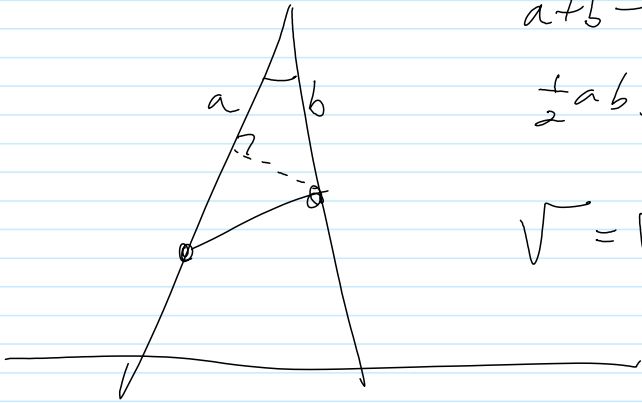


Feb 24 Scratch

February-24-15 9:23 AM



$$a+b - \sqrt{b^2 \sin^2 \alpha + (a-b \cos \alpha)^2} = \text{const}$$

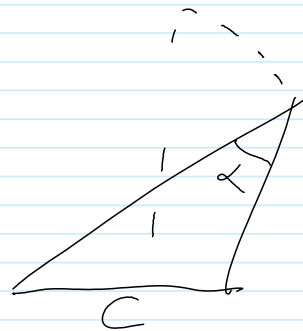
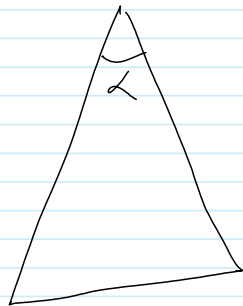
$$\frac{1}{2} ab \sin \alpha$$

$$\sqrt{} = \sqrt{b^2 + a^2 - 2ab \cos \alpha}$$

$$\nabla (ab \sin \alpha + \lambda (a+b - \sqrt{a^2 + b^2 - 2ab \cos \alpha})) =$$

$$b \sin \alpha + \lambda - \lambda \frac{a - b \cos \alpha}{\sqrt{a^2 + b^2 - 2ab \cos \alpha}} = 0$$

$$a \sin \alpha + \lambda - \lambda \frac{b - a \cos \alpha}{\sqrt{a^2 + b^2 - 2ab \cos \alpha}} = 0$$



$$a+b - \sqrt{a^2 + b^2} = \text{const}$$

min a b

Derangements:

1 2 3 4 5 6
2 5 4 3 6 1