$$S_{ABC} = \frac{5}{4} = \frac{AC \cdot BC \cdot \sin x}{2}$$

$$\frac{5}{2} = \sqrt{\frac{17}{2}} \cdot \sin x$$

$$\frac{17}{2} \cdot \sin^2 x = \frac{25}{4}$$

$$\sin^2 x = \frac{25}{34}$$

$$\sin \alpha = \frac{5}{\sqrt{34}} \approx 121^\circ$$

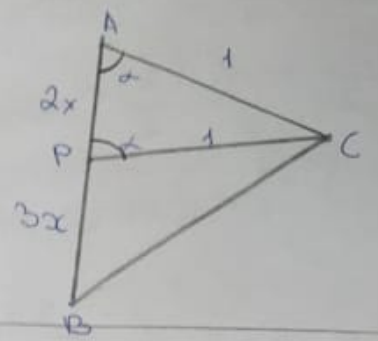
1

$AP:BP = 2:3$

$AC = CP = 1$

$\angle ACP = ?$

$\angle ABC = MAX$



$\angle CAP + \angle CPA + \angle ACP = 180°$

$\alpha + \alpha + \angle ACP = 180°$

$\angle ACP = 180 - 2\alpha$

$S_{ABC} = S_{APC} + S_{BPC}$

$S_{APC} = \frac{AP \cdot CP \cdot \sin\alpha}{2} = \frac{AC \cdot CP \cdot \sin(180-2\alpha)}{2}$

$S_{BPC} = \frac{BP \cdot CP \cdot \sin(180-2\alpha)}{2}$

$\sin = \sin(180-\alpha)$

$S_{APC} = \frac{2x \cdot 1 \cdot \sin\alpha}{2} = x \cdot \sin\alpha =$

$= \frac{1 \cdot 1 \cdot \sin 2\alpha}{2}$

$S_{BPC} = \frac{3x \cdot 1 \cdot \sin\alpha}{2} = (x \cdot \sin\alpha) \cdot \frac{3}{2}$

S_{APC} - MAX, если $\sin 2\alpha = 1$; Таким образом

$2\alpha = 90°$; $\alpha = 45$;

Следовательно $AP = 2x = \sqrt{2}$; $x = \frac{1}{\sqrt{2}} \Rightarrow$

$S_{APC} = \frac{5x \cdot \sin\alpha \cdot 1}{2} = \frac{5}{2\sqrt{2}} \cdot \sin 45 = \frac{5}{4}$

Теорема косинусов

$BC^2 = AC^2 + AB^2 - 2AC \cdot AB \cdot \cos\alpha$

$BC^2 = 1 + \left(\frac{5}{\sqrt{2}}\right)^2 - 2 \cdot 1 \cdot \frac{5}{\sqrt{2}} \cdot \frac{\sqrt{2}}{2}$

$BC^2 = \frac{17}{2}$

2

1

С начала он может провести первый процесс 2020 раз. Затем второй процесс 2020.

Третий аналогично

~~Зато~~

$2020! \cdot 2020! \cdot 2020!$ ~~2020^3~~