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$$2 \cos^2 x + 4 \cos^2 x > 5 \cos x$$

$$2(1 - \cos^2 x) + 4 \cos^2 x > 5 \cos x$$

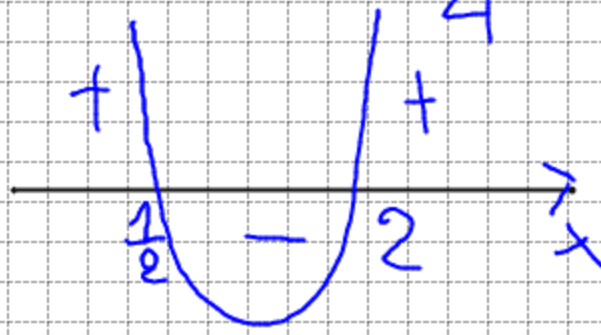
$$2 - 2 \cos^2 x + 4 \cos^2 x > 5 \cos x$$

$$2 \cos^2 x - 5 \cos x + 2 > 0 \quad \cos x = t$$

$$2t^2 - 5t + 2 > 0$$

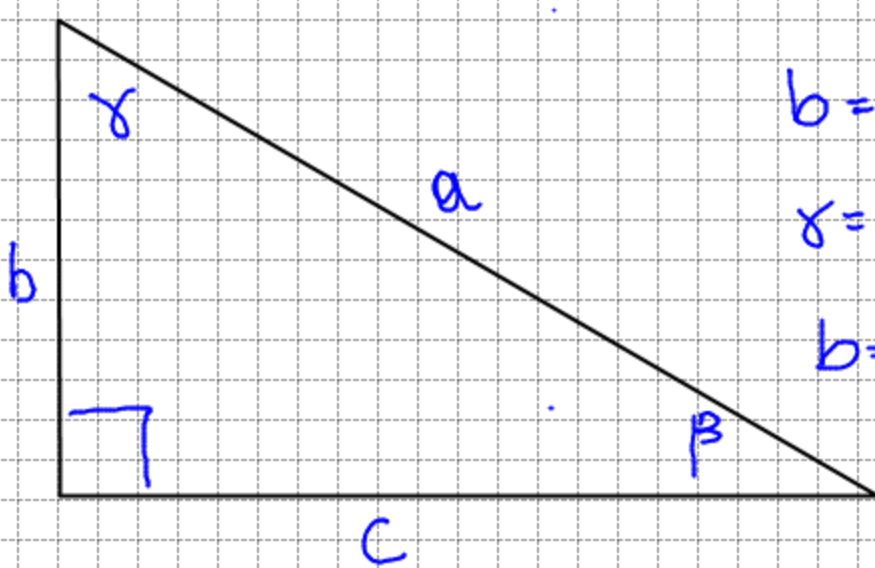
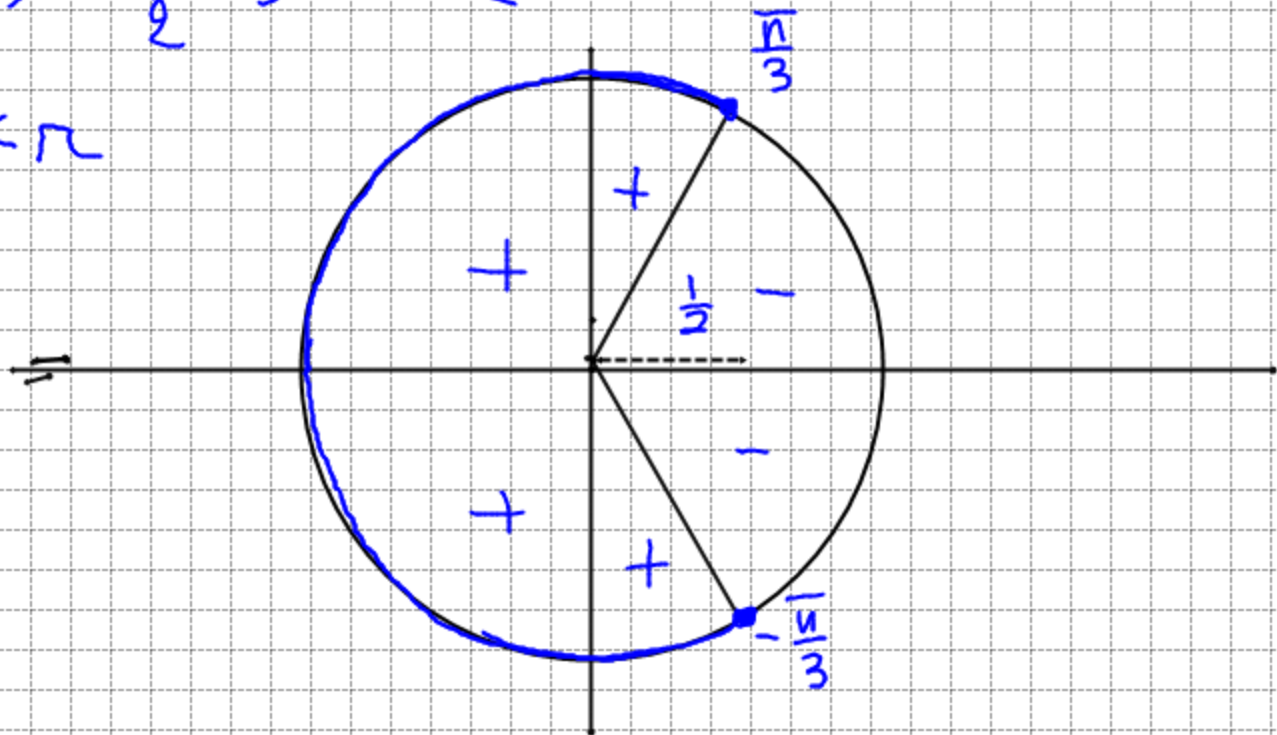
$$t_{1,2} = \frac{5 \pm \sqrt{25 - 16}}{4} = \frac{5 \pm 3}{4} \begin{cases} t_1 = \frac{1}{2} \\ t_2 = 2 \end{cases}$$

$$S: t < \frac{1}{2} \cup t > 2$$



$$S: \cos x < \frac{1}{2} \cup \cos x > 2$$

$$x < \pi$$



$$b = 18 \quad \beta = \frac{\pi}{3}$$

$$\alpha = \frac{\pi}{6}$$

$$b = a \sin \beta$$

$$a = \frac{b}{\sin \beta}$$

$$a = \frac{18}{\frac{1}{2}}$$

$$a = 18 \cdot \frac{2}{1} \rightarrow \frac{36}{1}$$

$$a = \frac{36}{1} \cdot \frac{1}{1} = \frac{36}{1}$$

$$a = 12\sqrt{3}$$

$$c = a \cos \beta$$

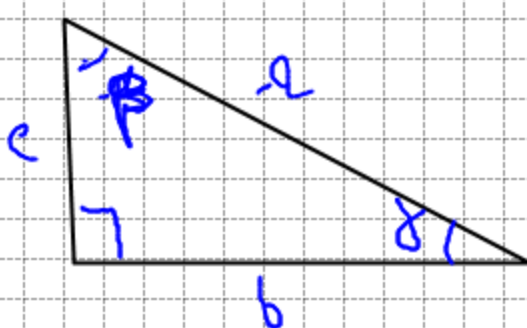
$$c = 12\sqrt{3} \cdot \frac{1}{2}$$

$$c = 6\sqrt{3}$$

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$$b + c = 90 \text{ cm}$$

$$\tan \beta = \frac{1}{2}$$



$$Q = ?$$

$$b = c \tan \beta$$

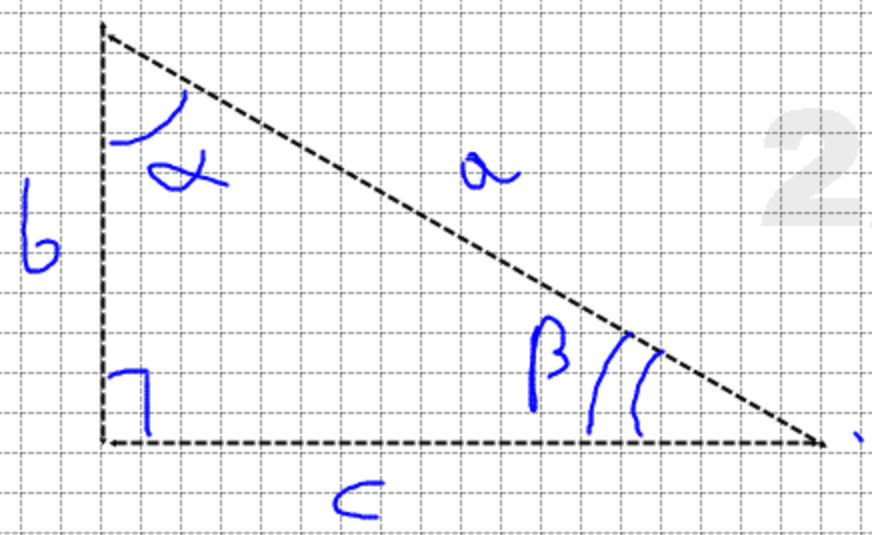
$$\begin{cases} b = \frac{1}{2}c \\ b = \frac{1}{2}c \end{cases}$$

$$\frac{3c}{2} = 90 \Rightarrow c = \frac{90 \cdot 2}{3} = 60 \text{ cm}$$

$$b = 30 \text{ cm}$$

$$Q = \frac{1}{2} \cdot 60 \cdot 30 = 900 \text{ cm}^2$$

M.6
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$$a = 10$$

$$b = 5$$

$$b = a \sin \beta$$

$$\sin \beta = \frac{5}{10} = \frac{1}{2}$$

$$\beta = \frac{\pi}{6}$$

$$c = a \cos \beta$$

$$c = 10 \frac{\sqrt{3}}{2} = 5\sqrt{3}$$

$$c = a \sin \alpha$$

$$\sin \alpha = \frac{c}{a}$$

$$\sin \alpha = \frac{5\sqrt{3}}{10} = \frac{\sqrt{3}}{2}$$

$$\alpha = \frac{\pi}{3}$$