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15,5 g Fe_2O_3
150,5 g CO

$$n = \frac{15,5 \text{ g/mol}}{159,7} = 0,1 \text{ mol}$$

159,7
28,01

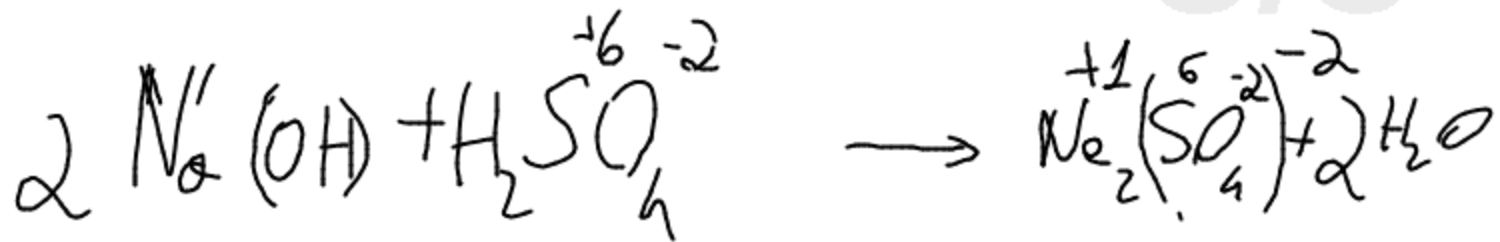
$$n = \frac{150,5 \text{ g/mol}}{28,01} = 5,37 \text{ mol}$$

m CO $0,1 : x = 1 : 3$

$$x = \frac{0,1 \cdot 3}{1} = 0,3$$

g Fe = ? $0,2 \cdot (55,85 \cdot 2) =$

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mass % = 70%

mass % = 50%

$$\text{mass \%} = \frac{50}{70} \cdot 100$$

71.4%

$$\frac{\operatorname{ctg} x \cdot \operatorname{sen}\left(\frac{\pi}{3}-x\right)}{(\operatorname{tg} x - \sqrt{3})(\operatorname{tg} x + 1)} > 0$$

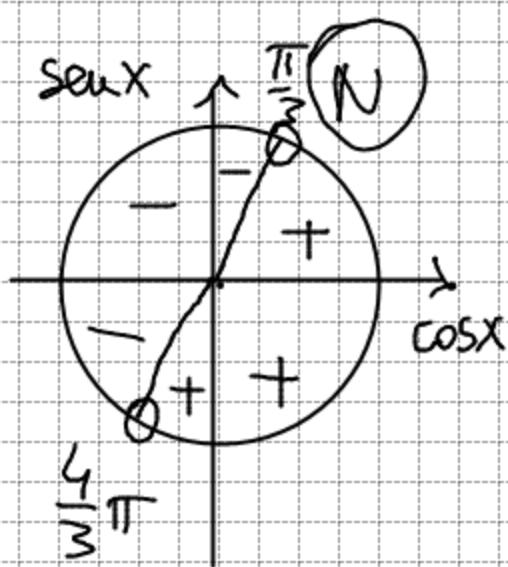
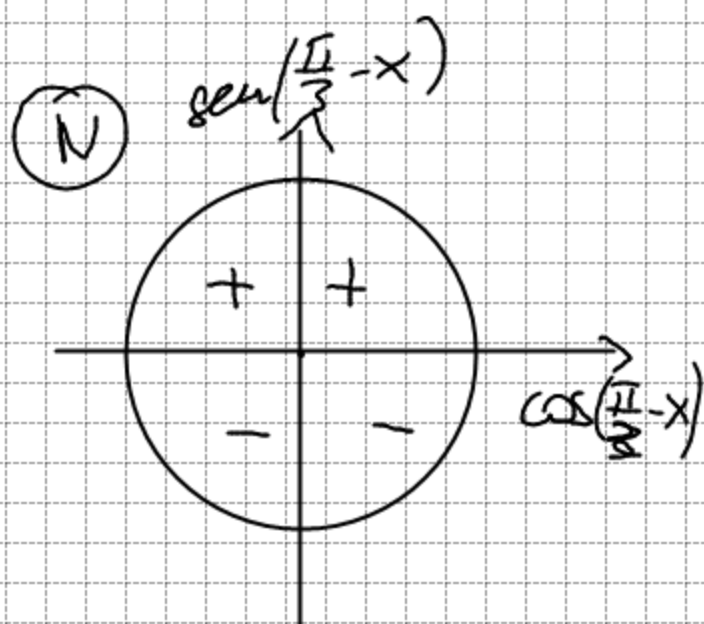
$$\frac{\operatorname{sen}\left(\frac{\pi}{3}-x\right)}{\operatorname{tg} x (\operatorname{tg} x - \sqrt{3})(\operatorname{tg} x + 1)} > 0$$

$$N(x) > 0 \Rightarrow \operatorname{sen}\left(\frac{\pi}{3}-x\right) > 0$$

$$0 + 2k\pi < \frac{\pi}{3} - x < \pi + 2k\pi$$

$$2k\pi - \frac{\pi}{3} < -x < \frac{2}{3}\pi + 2k\pi$$

$$N) \quad -\frac{2}{3}\pi + 2k\pi < x < \frac{\pi}{3} + 2k\pi$$



$$D(x) > 0 \Rightarrow \operatorname{tg} x (\operatorname{tg} x - \sqrt{3})(\operatorname{tg} x + 1) > 0$$

$$D_1(x) > 0 \Rightarrow \operatorname{tg} x > 0$$

$$0 + k\pi < x < \frac{\pi}{2} + k\pi$$

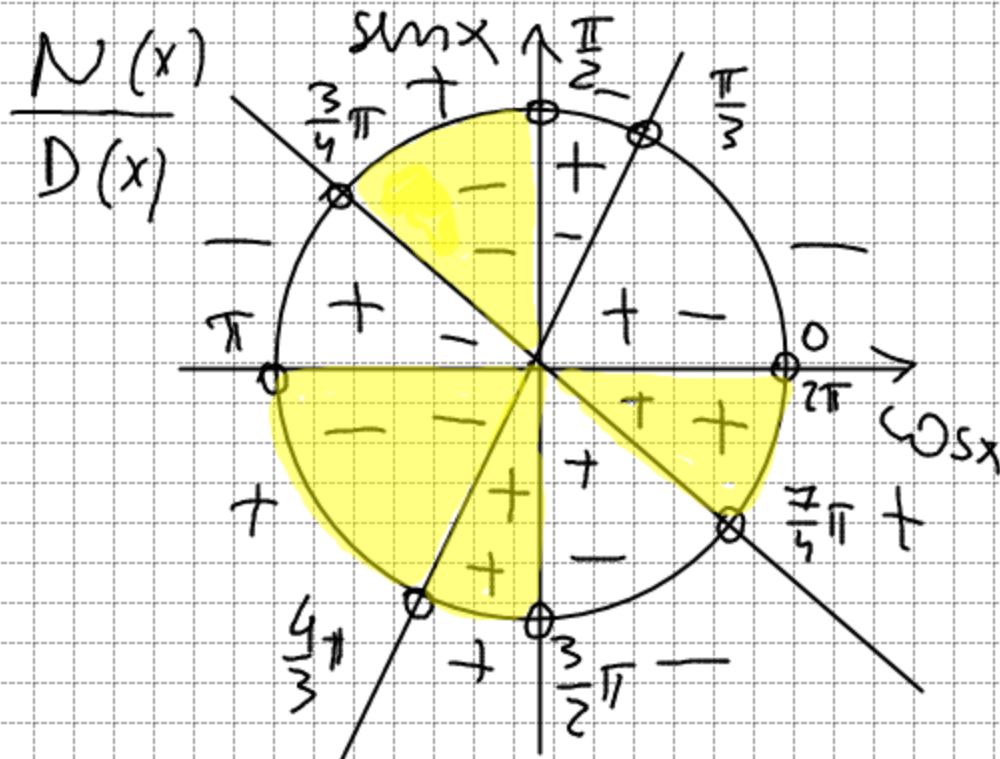
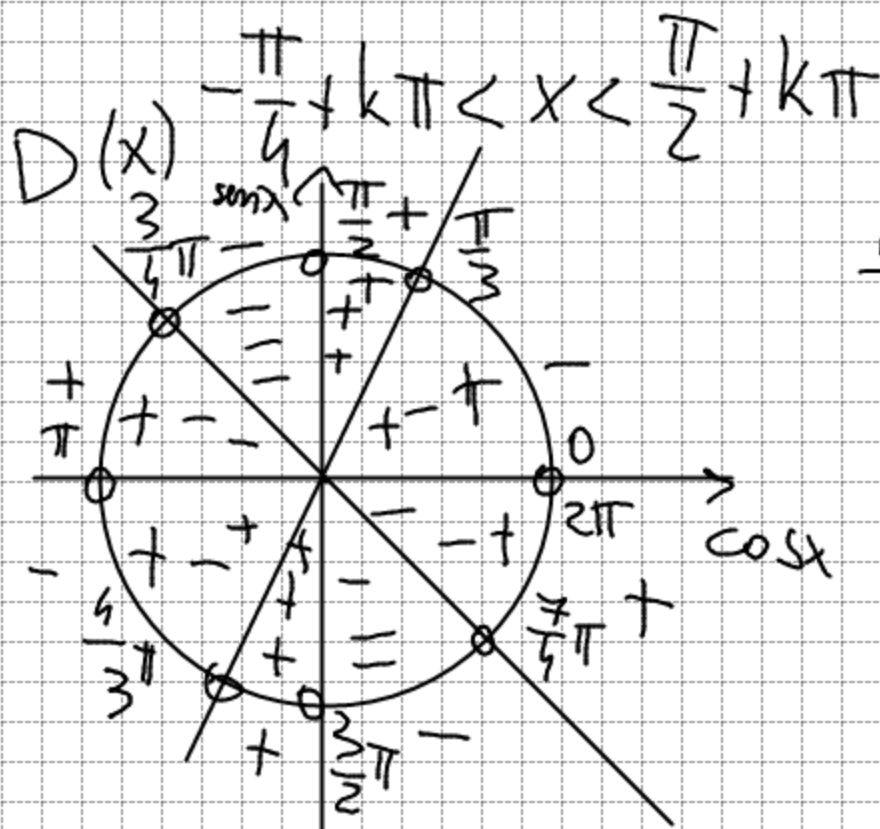
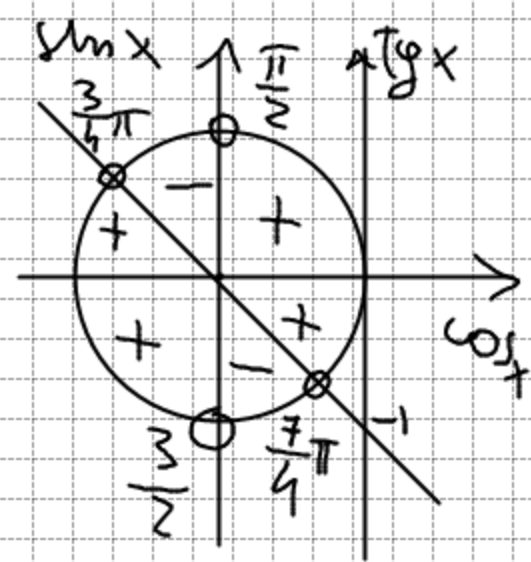
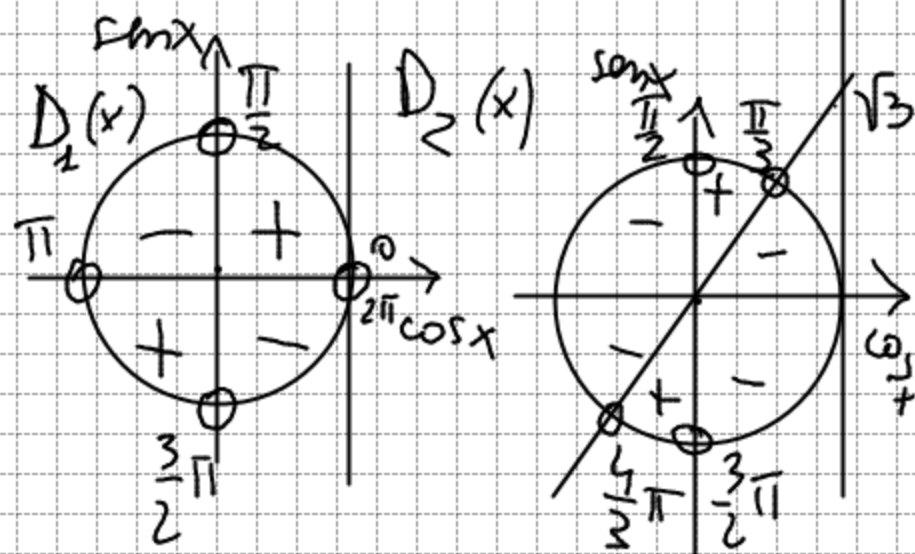
$$D_2(x) > 0 \Rightarrow \operatorname{tg} x - \sqrt{3} > 0$$

$$\operatorname{tg} x > \sqrt{3}$$

$$\frac{\pi}{3} + k\pi < x < \frac{\pi}{2} + k\pi$$

$$D_3(x) > 0 \Rightarrow \operatorname{tg} x + 1 > 0$$

$$\operatorname{tg} x > -1$$



$$S: \forall x \in \mathbb{R} \mid \frac{\pi}{2} + 2k\pi < x < \frac{3}{4}\pi + 2k\pi \cup \pi + 2k\pi < x < \frac{3}{2}\pi + 2k\pi \cup x \neq \frac{4}{3}\pi + 2k\pi \cup \frac{7}{4}\pi + 2k\pi < x < 2\pi + 2k\pi$$

$$\sin\left(\frac{\pi}{3} - x\right) > 0$$

$$\sin\frac{\pi}{3} \cos x - \sin x \cos\frac{\pi}{3} > 0$$

$$\frac{\sqrt{3}}{2} \cos x - \frac{1}{2} \sin x > 0$$

$$\sqrt{3} \cos x - \sin x > 0$$

$$\left\{ \begin{array}{l} \sqrt{3} \frac{\cos x}{\cos x} - \frac{\sin x}{\cos x} > 0 \\ \cos x > 0 \end{array} \right. \cup \left\{ \begin{array}{l} \cos x < 0 \\ \sqrt{3} \frac{\cos x}{\cos x} - \frac{\sin x}{\cos x} < 0 \end{array} \right.$$

$$\left\{ \begin{array}{l} \operatorname{tg} x < \sqrt{3} \\ \cos x > 0 \end{array} \right. \cup \left\{ \begin{array}{l} \operatorname{tg} x > \sqrt{3} \\ \cos x < 0 \end{array} \right.$$

