

$$\int_a^b f(x) dx$$

$$\int_a^b \cos^5 x dx$$

$$u = \cos x$$

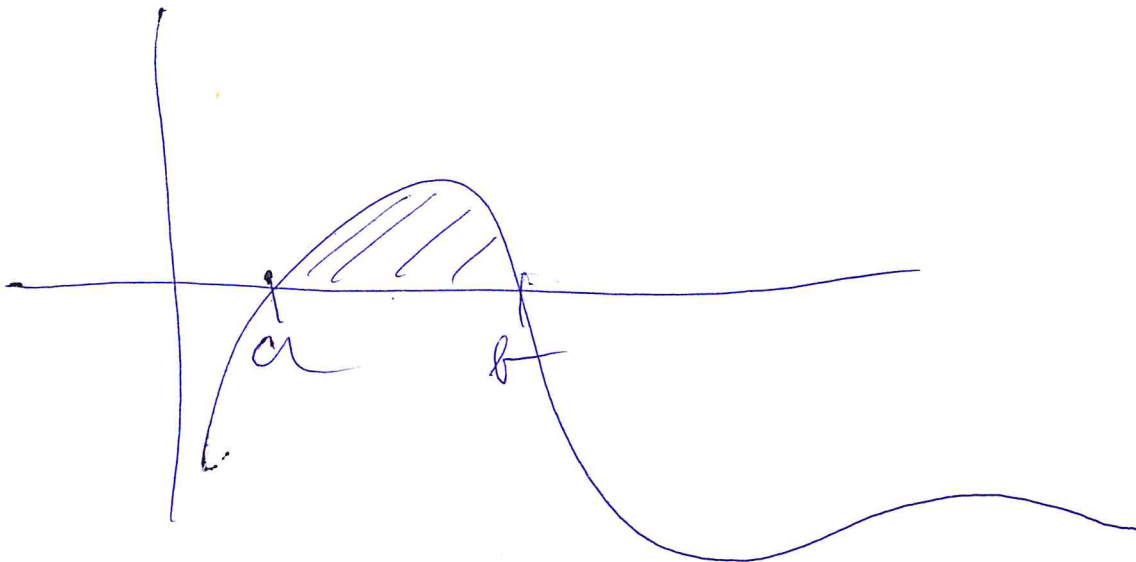
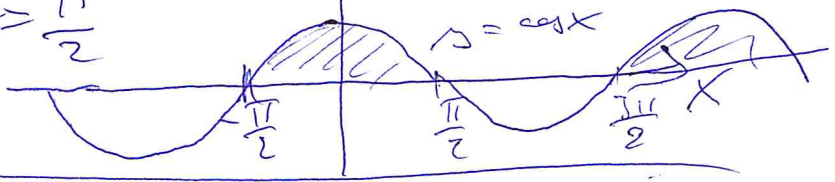
$$a = 0 \quad \text{or} \quad a = -\frac{\pi}{2}$$

$$b = 0 \quad \text{or} \quad b = \frac{\pi}{2}$$

$$\cos^5 x = 0$$

$$\cos^5 x > 0$$

$$\cos^5 x < 0$$



$$a^x = ?$$

Chace definovat exponenciální funkci

a ... základ - první část číslo

$$a^1 = a$$

$$a^2 = a \cdot a$$

$$a^{n+1} = a^n \cdot a$$

lefaat - pítrované číslo

$$a^0 = ?$$

$$a^0 = 1 \quad a \neq 0$$

$$a^{\frac{1}{2}} = ?$$

$$a^{\frac{1}{2}} = \sqrt{a} \quad a \geq 0$$

$$a^{-1} = ?$$

$$a^{-1} = \frac{1}{a} \quad a \neq 0$$

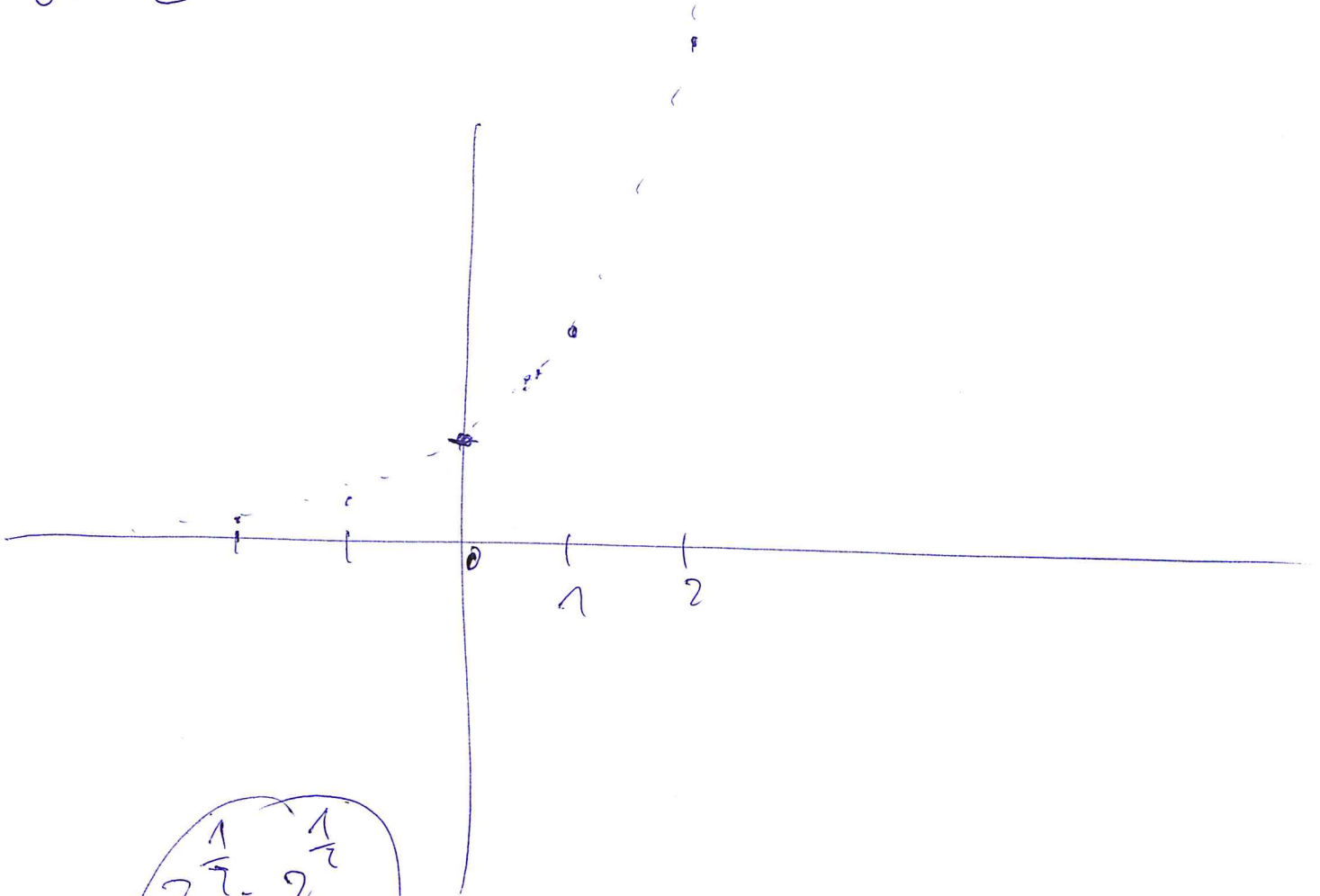
$$q = \frac{m}{n}$$

racionální exponent

$$a^{\frac{m}{n}} = \sqrt[n]{a^m}$$

$$a^{-\frac{m}{n}} = \frac{1}{\sqrt[n]{a^m}}$$

$$a = 2$$



$$2^{\frac{1}{2}} \cdot 2^{\frac{1}{2}} = 2^1$$

$$\sqrt{2} \cdot \sqrt{2} = 2$$

$$a^{m+n} = a^m \cdot a^n$$

$$m = \frac{1}{2} \quad n = \frac{1}{2}$$

$$a = a^{\frac{1}{2} + \frac{1}{2}} = a^{\frac{1}{2}} \cdot a^{\frac{1}{2}} \quad a^{\frac{1}{2}} = \sqrt{a}$$