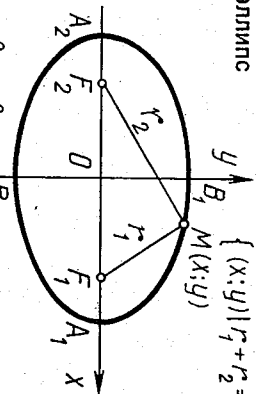


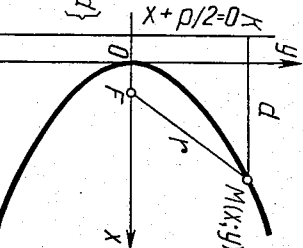
ЭЛЛИПС



$$\{(x; y) | r_1 + r_2 = 2a\}$$

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \iff \begin{cases} x = a \cos t, \\ y = b \sin t, \end{cases}$$

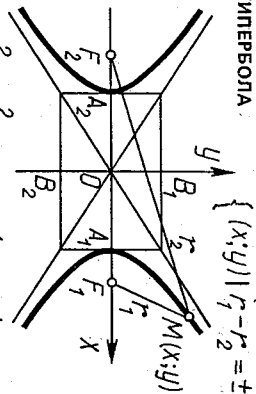
ПАРАБОЛА



$$\{(x; y) | r = d\}$$

$$y^2 = 2px$$

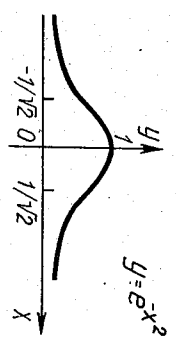
ГИПЕРБОЛА



$$\{(x; y) | r_1 - r_2 = \pm 2a\}$$

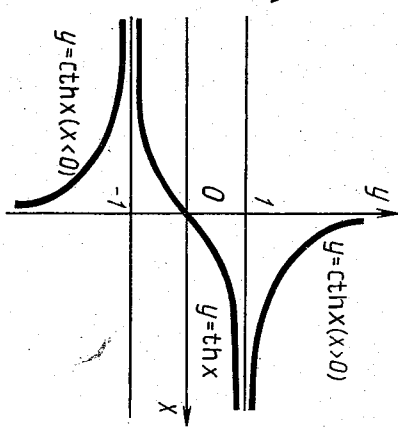
$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \iff \begin{cases} x = a \operatorname{ch} t, \\ y = b \operatorname{sh} t, \end{cases} (x > 0)$$

КРИВАЯ ВЕРЮТНОСТЕЙ



$$y = e^{-x^2}$$

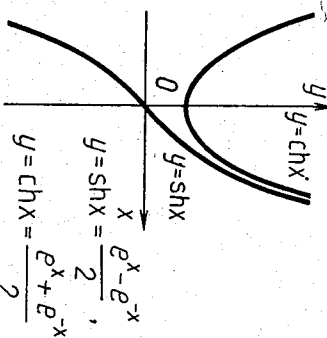
ГРАФИКИ ГИПЕРБОЛИЧЕСКИХ ТАНГЕНСА И КОТАНГЕНСА



$$y = \operatorname{th} x$$

$$y = \operatorname{ctgh} x (x > 0)$$

ГРАФИКИ ГИПЕРБОЛИЧЕСКИХ СИНУСА И КОСИНУСА



$$y = \operatorname{sh} x$$

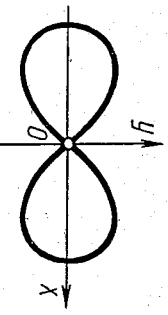
$$y = \operatorname{ch} x$$

$$y = \operatorname{sh} x = \frac{e^x - e^{-x}}{2}$$

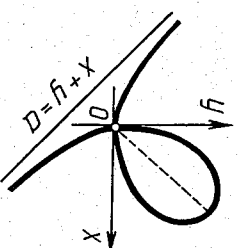
$$y = \operatorname{ch} x = \frac{e^x + e^{-x}}{2}$$

$$y = \operatorname{th} x = \frac{e^x - e^{-x}}{e^x + e^{-x}}, \quad y = \operatorname{ctgh} x = \frac{e^x + e^{-x}}{e^x - e^{-x}}$$

ЛЕМНИСКАТА БЕРНУЛЛИ



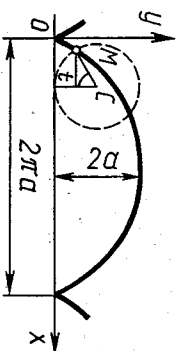
ДЕКАРТОВ ЛИСТ



$$x^3 + y^3 - 3axy = 0 \iff \begin{cases} x = 3at / (1+t^3), \\ y = 3at^2 / (1+t^3) \end{cases}$$

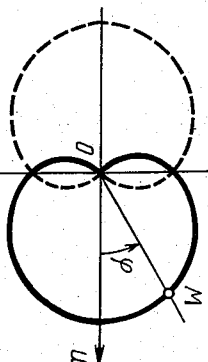
$$r^2 = a^2 \cos 2\varphi \iff (x^2 + y^2)^2 = a^2 (x^2 - y^2)$$

ЦИКЛОИДА



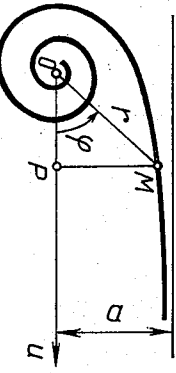
$$\begin{cases} x = a(t - \sin t), \\ y = a(1 - \cos t) \end{cases}$$

КАРДИОИДА



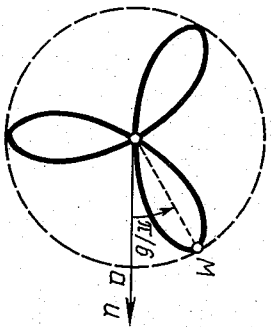
$$r = a(1 \pm \cos \varphi)$$

ГИПЕРБОЛИЧЕСКАЯ СПИРАЛЬ



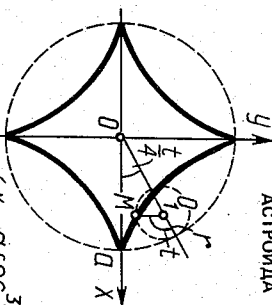
$$r = a / \varphi (r > 0)$$

ТРЕХЛЕПЕСТКОВАЯ РОЗА



$$r = a \sin 3\varphi$$

АСТРОИДА



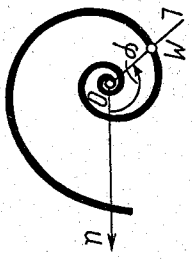
$$\begin{cases} x = a \cos^3 t, \\ y = a \sin^3 t, \end{cases} \iff \begin{cases} x^{2/3} + y^{2/3} = a^{2/3} \end{cases}$$

СПИРАЛЬ АРХИМЕДА



$$r = a\varphi$$

ЛОГАРИФИЧЕСКАЯ СПИРАЛЬ



$$r = a e^{\varphi}$$