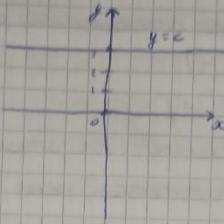


Основные экспоненциальные функции

1) Константная функция: $y = C$

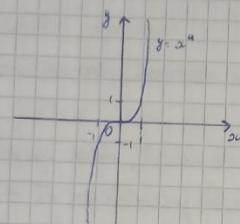
$$D(f) \in \mathbb{R}$$

$$E(f) \in C$$



2) Инволюционная функция: $y = x^\alpha$, $\alpha \in \mathbb{R}$

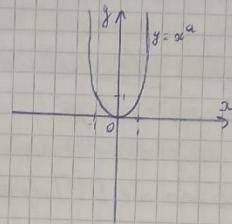
при α - чётное, положительное



$$D(f) \in \{-\infty; +\infty\}$$

$$E(f) \in \{-\infty; +\infty\}$$

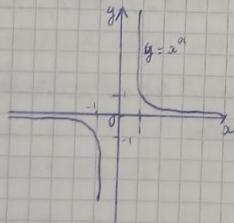
при α - чётное, ненулевое



$$D(f) \in \{-\infty; +\infty\}$$

$$E(f) \in [0; +\infty)$$

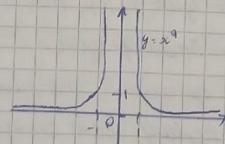
при α - нечётное, отрицательное



$$D(f) \in (-\infty; 0) \cup (0; +\infty)$$

$$E(f) \in (-\infty; 0) \cup (0; +\infty)$$

при α - чётное, отрицательное



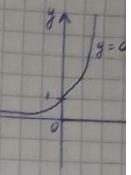
$$D(f) \in (-\infty; 0) \cup (0; +\infty)$$

$$E(f) \in [0; +\infty)$$

3) Показательная функция: $y = a^x$. ~~если $a > 0$~~

$$D(f) \in \mathbb{R}$$

$$E(f) \in (0; +\infty)$$



4) Логарифмическая



5) Тригонометрическая

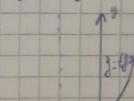
$$y = \sin(\omega x)$$



$$D(f) \in \mathbb{R}$$

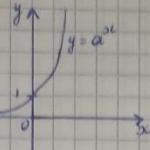
$$E(f) \in [-1, 1]$$

$$y = f_8(x)$$

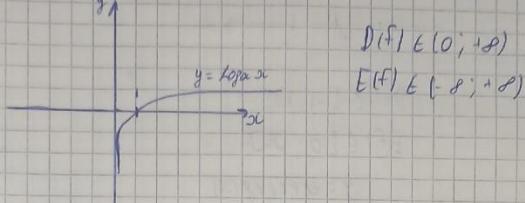


$$D(f) \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

$$E(f) \in (-\infty, +\infty)$$

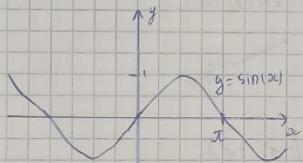


4) Логарифмическая функция $y = \log_a x$, $a > 0$; $a \neq 1$



5 / Тригонометрические функции

$$y = \sin(\omega x)$$

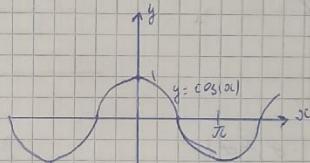


$$D(f) \subset \mathbb{R}$$

$$E(f) \subset [-1, 1]$$

$$y = \cos(\omega x)$$

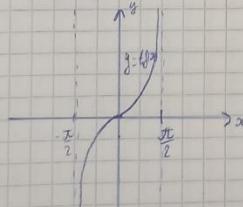
$$y = \cos(\omega x)$$



$$D(f) \subset \mathbb{R}$$

$$E(f) \subset [-1, 1]$$

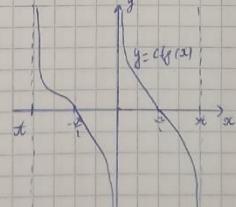
$$y = \operatorname{tg}(\omega x)$$



$$D(f) \subset \left(-\frac{\pi}{2}, \frac{\pi}{2}\right) \cup \left(\frac{2k\pi}{\omega}, \frac{(2k+1)\pi}{\omega}\right), k \in \mathbb{Z}$$

$$E(f) \subset (-\infty, +\infty)$$

$$y = \operatorname{ctg}(\omega x)$$

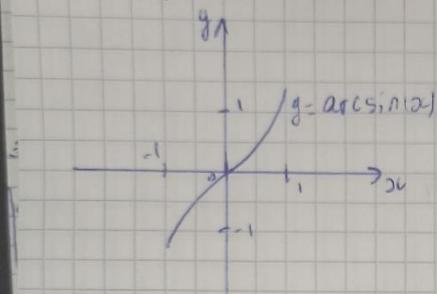


$$D(f) \subset (\pi k, \pi + \pi k), k \in \mathbb{Z}$$

$$E(f) \subset (-\infty, +\infty)$$

6. Графике тригонометрических функций

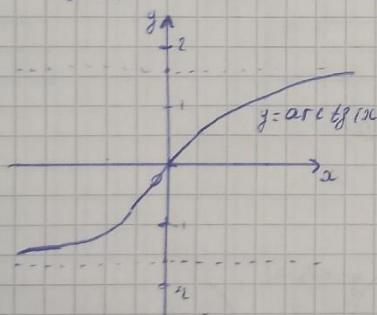
$$y = \arcsin(x)$$



$$D(f) \in [-1, 1]$$

$$E(f) \in [-\frac{\pi}{2}; \frac{\pi}{2}]$$

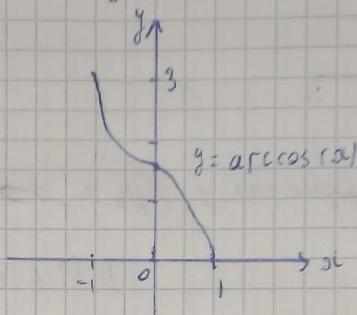
$$\# y = \operatorname{arctg}(x)$$



$$D(f) \in (-\infty; +\infty)$$

$$E(f) \in (-\frac{\pi}{2}; \frac{\pi}{2})$$

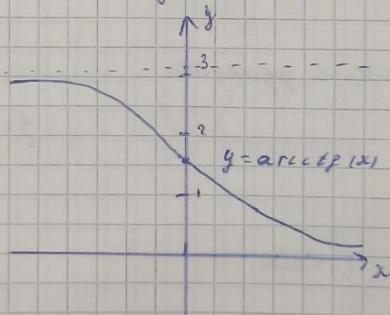
$$y = \arccos(x)$$



$$D(f) \in [-1, 1]$$

$$E(f) \in [0; \pi]$$

$$y = \operatorname{arcctg}(x)$$



$$D(f) \in (-\infty; +\infty)$$

$$E(f) \in (0; \pi)$$