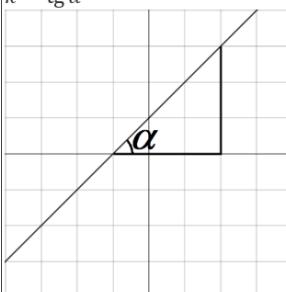
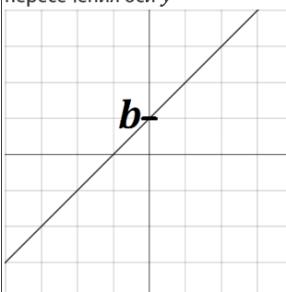


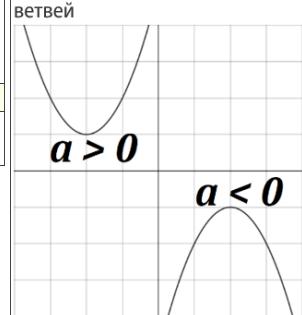
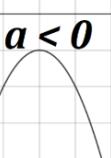
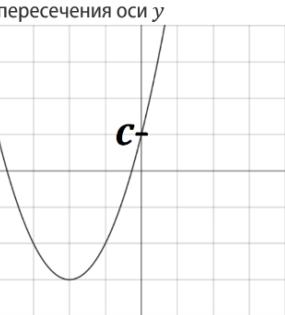
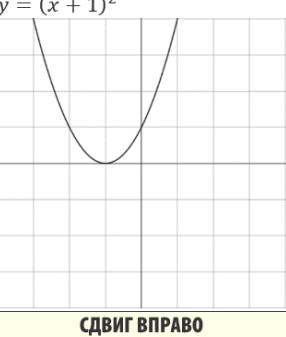
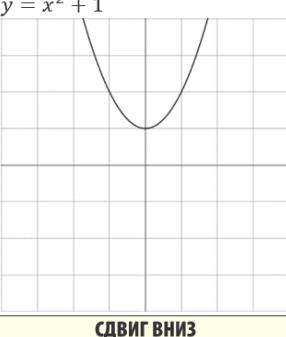
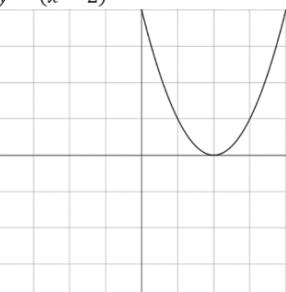
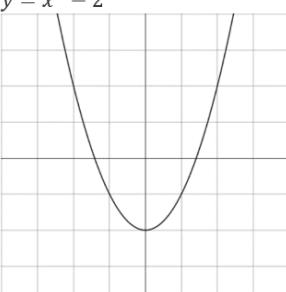
# СПРАВОЧНЫЕ МАТЕРИАЛЫ ПО ЗАДАНИЯМ 11



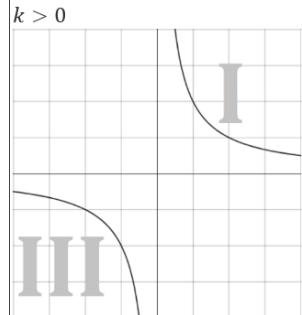
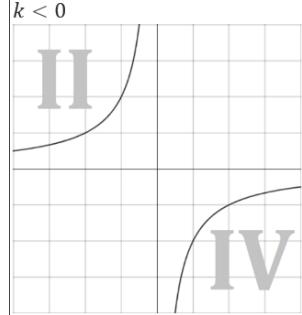
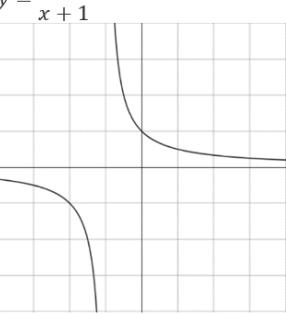
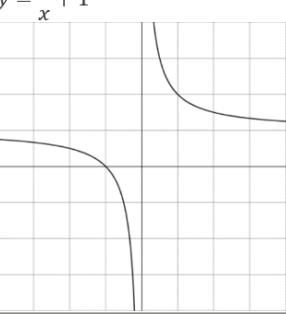
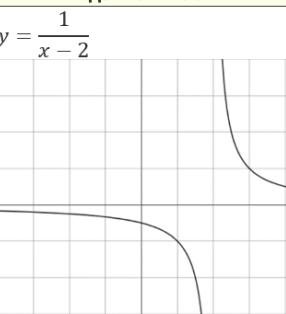
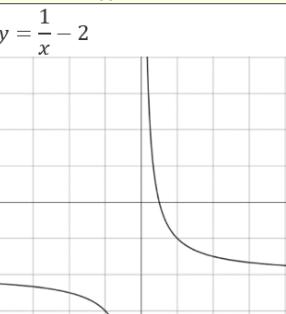
## ПРЯМАЯ

<b>УРАВНЕНИЕ ПРЯМОЙ</b> $y = kx + b$ $y = kx$ $y = b$	<b>ЗА ЧТО ОТВЕЧАЕТ <math>k</math></b> $k$ отвечает за наклон прямой $k = \operatorname{tg} \alpha$ 	<b>ЗА ЧТО ОТВЕЧАЕТ <math>b</math></b> $b$ отвечает за координату пересечения оси $y$ 
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## ПАРАБОЛА

<b>УРАВНЕНИЕ ПАРАБОЛЫ</b> $y = ax^2 + bx + c$ $y = ax^2 + bx$ $y = ax^2 + c$ $y = ax^2$	<b>ЗА ЧТО ОТВЕЧАЕТ <math>a</math></b> $a$ отвечает за направление ветвей  	<b>ЗА ЧТО ОТВЕЧАЕТ <math>c</math></b> $c$ отвечает за координату пересечения оси $y$ 	<b>СДВИГ ВЛЕВО</b> $y = (x + 1)^2$ 	<b>СДВИГ ВВЕРХ</b> $y = x^2 + 1$ 
<b>ВЕРШИНА ПАРАБОЛЫ</b> $x_0 = -\frac{b}{2a}$			<b>СДВИГ ВПРАВО</b> $y = (x - 2)^2$ 	<b>СДВИГ ВНИЗ</b> $y = x^2 - 2$ 

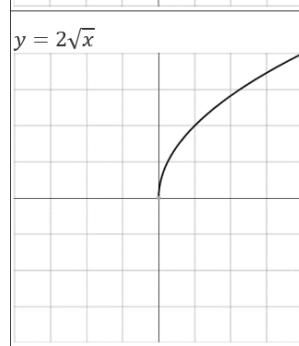
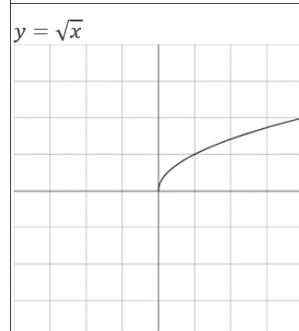
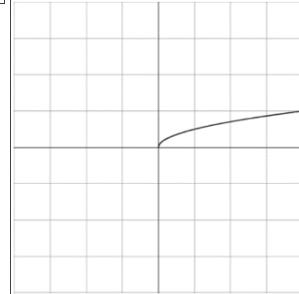
## ГИПЕРБОЛА

<b>УРАВНЕНИЕ ГИПЕРБОЛЫ</b> $y = \frac{k}{x}$	<b>ЗА ЧТО ОТВЕЧАЕТ <math>k</math></b> $k$ отвечает за расположение ветвей гиперболы в разных четвертях $k > 0$  $k < 0$ 	<b>СДВИГ ВЛЕВО</b> $y = \frac{1}{x + 1}$ 	<b>СДВИГ ВВЕРХ</b> $y = \frac{1}{x} + 1$ 
		<b>СДВИГ ВПРАВО</b> $y = \frac{1}{x - 2}$ 	<b>СДВИГ ВНИЗ</b> $y = \frac{1}{x} - 2$ 

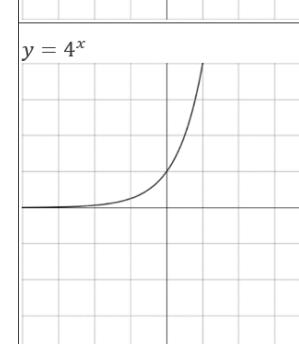
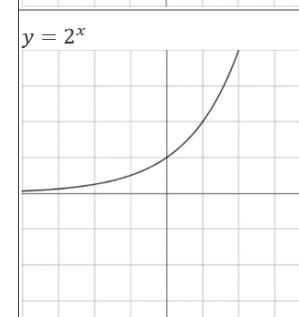
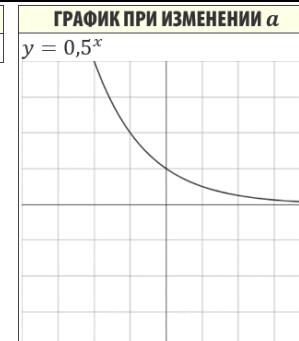
## ФУНКЦИЯ КОРНЯ

УРАВНЕНИЕ КОРНЯ
$y = k\sqrt{x}$

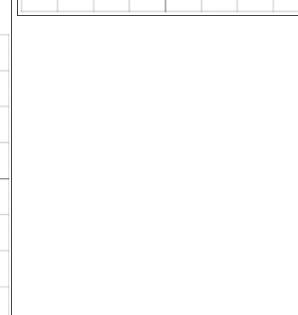
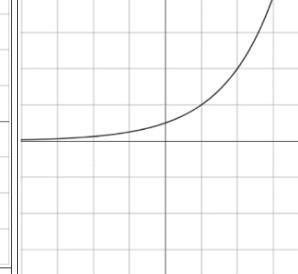
ГРАФИК ПРИ ИЗМЕНЕНИИ $k$
$y = 0,5\sqrt{x}$



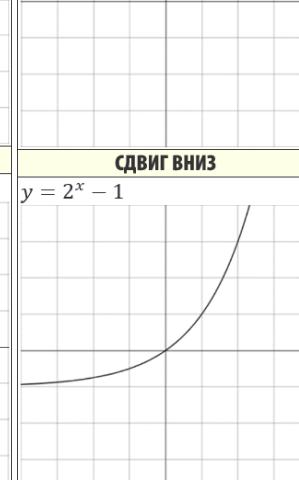
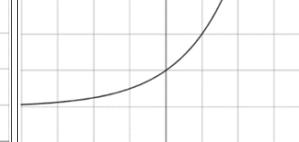
УРАВНЕНИЕ ФУНКЦИИ
$y = a^x$



### СДВИГ ВЛЕВО



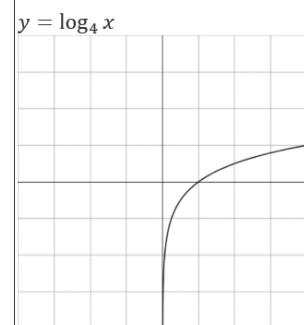
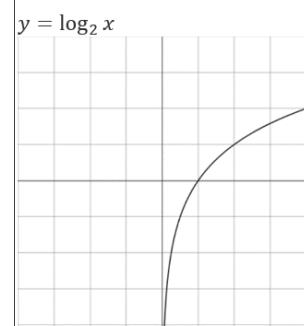
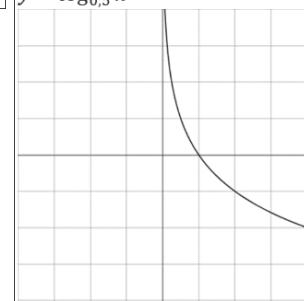
СДВИГ ВВЕРХ
$y = 2^x + 1$



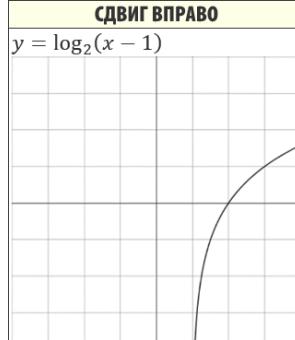
## ЛОГАРИФМИЧЕСКАЯ ФУНКЦИЯ

УРАВНЕНИЕ ФУНКЦИИ
$y = \log_a x$

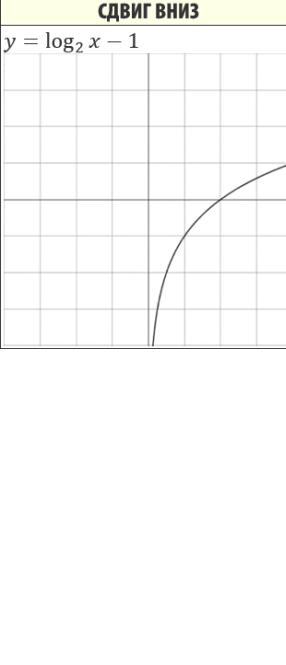
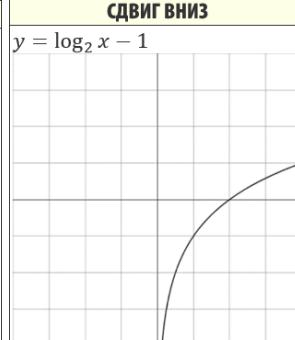
ГРАФИК ПРИ ИЗМЕНЕНИИ $a$
$y = \log_{0,5} x$



СДВИГ ВЛЕВО
$y = \log_2(x + 1)$



СДВИГ ВВЕРХ
$y = \log_2 x + 1$



## ФУНКЦИЯ СИНУСА

УРАВНЕНИЕ ФУНКЦИИ
$y = a \sin x + b$

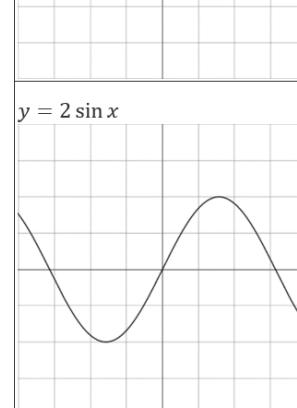
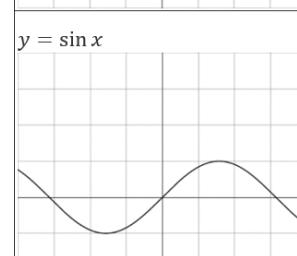
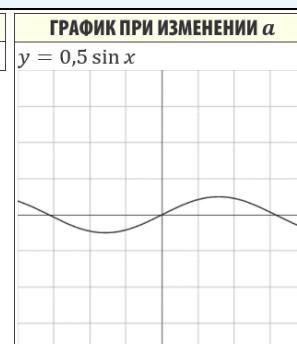
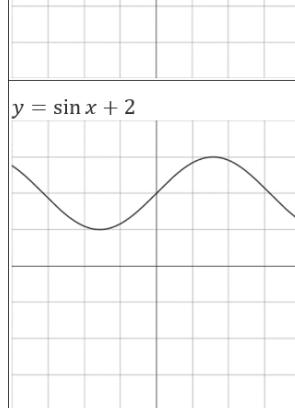
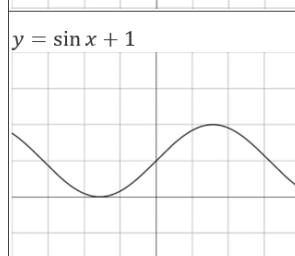
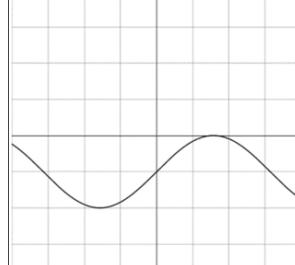


ГРАФИК ПРИ ИЗМЕНЕНИИ $b$
$y = \sin x - 1$

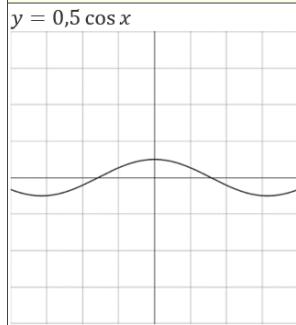


## ФУНКЦИЯ КОСИНУСА

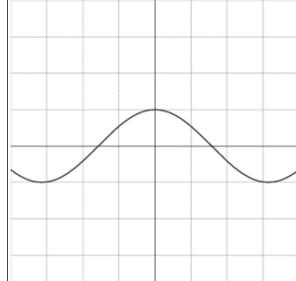
### УРАВНЕНИЕ ФУНКЦИИ

$$y = a \cos x + b$$

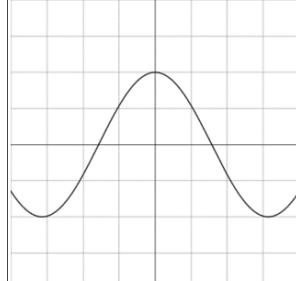
### ГРАФИК ПРИ ИЗМЕНЕНИИ $a$



$$y = \cos x$$



$$y = 2 \cos x$$

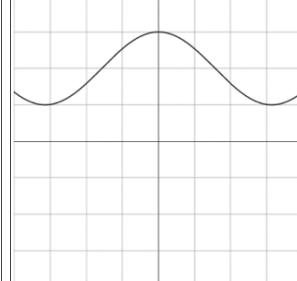


### ГРАФИК ПРИ ИЗМЕНЕНИИ $b$

$$y = \cos x - 1$$

$$y = \cos x + 1$$

$$y = \cos x + 2$$

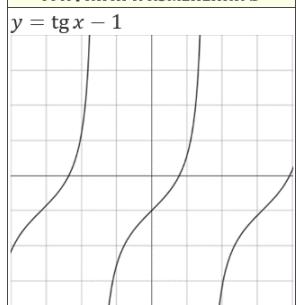


## ФУНКЦИЯ ТАНГЕНСА

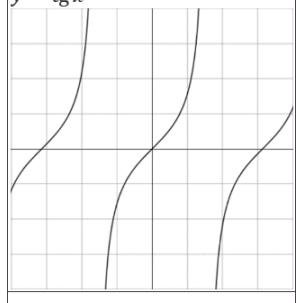
### УРАВНЕНИЕ ФУНКЦИИ

$$y = a \operatorname{tg} x + b$$

### ГРАФИК ПРИ ИЗМЕНЕНИИ $b$



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



$$y = \operatorname{tg} x + 1$$

