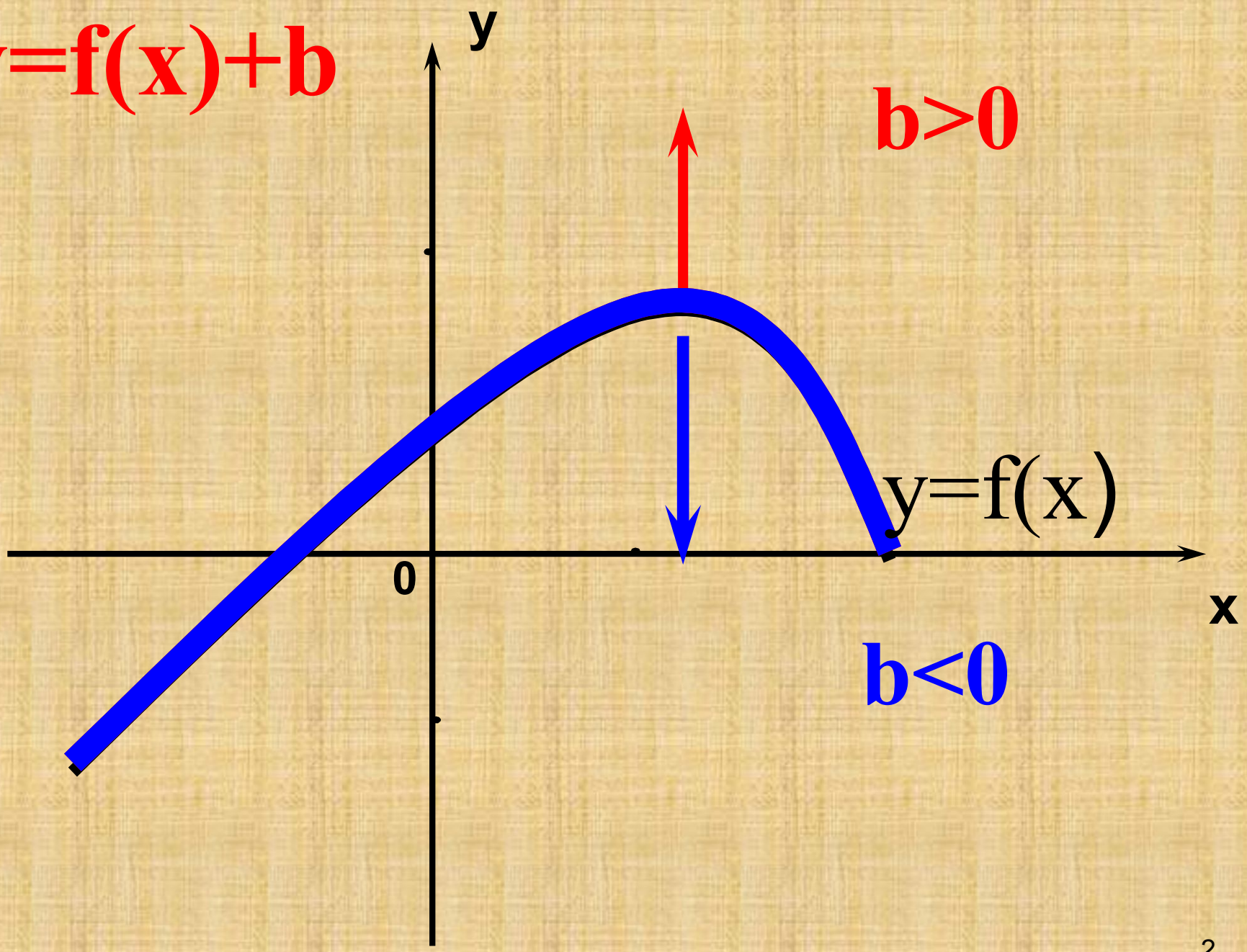
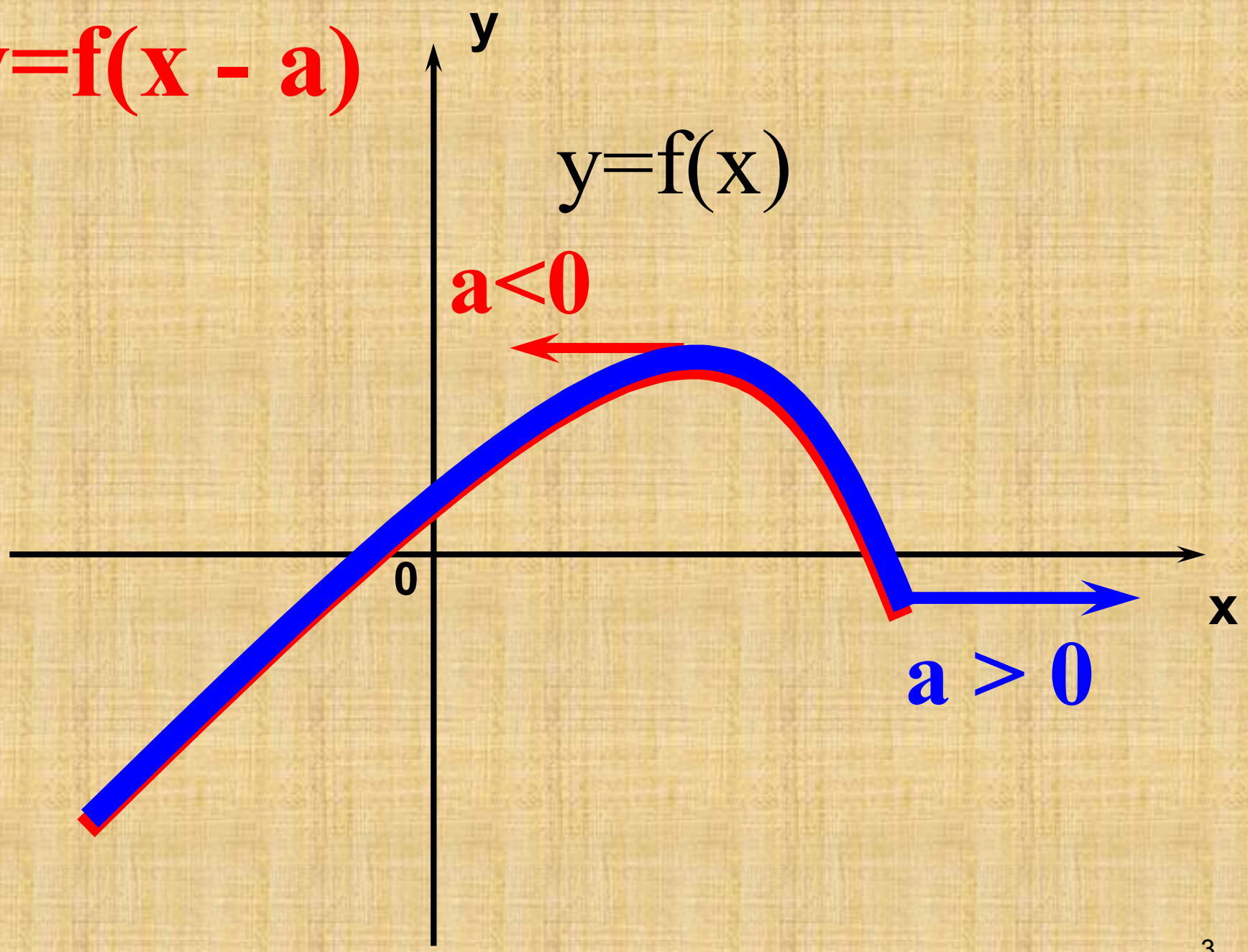
РЕШЕНИЕ УРАВНЕНИЙ

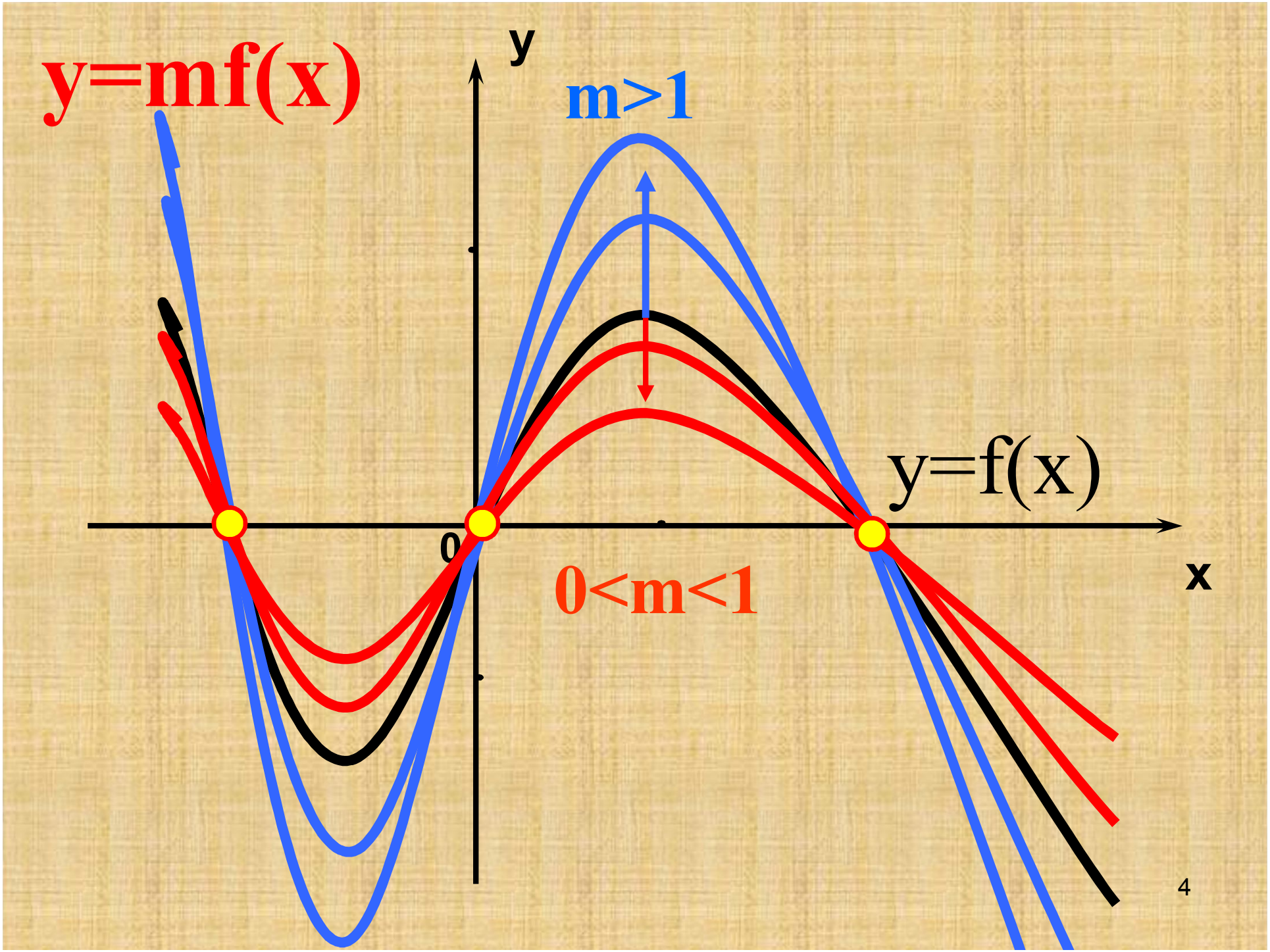
ГРАФИЧЕСКИЙ СПОСОБ

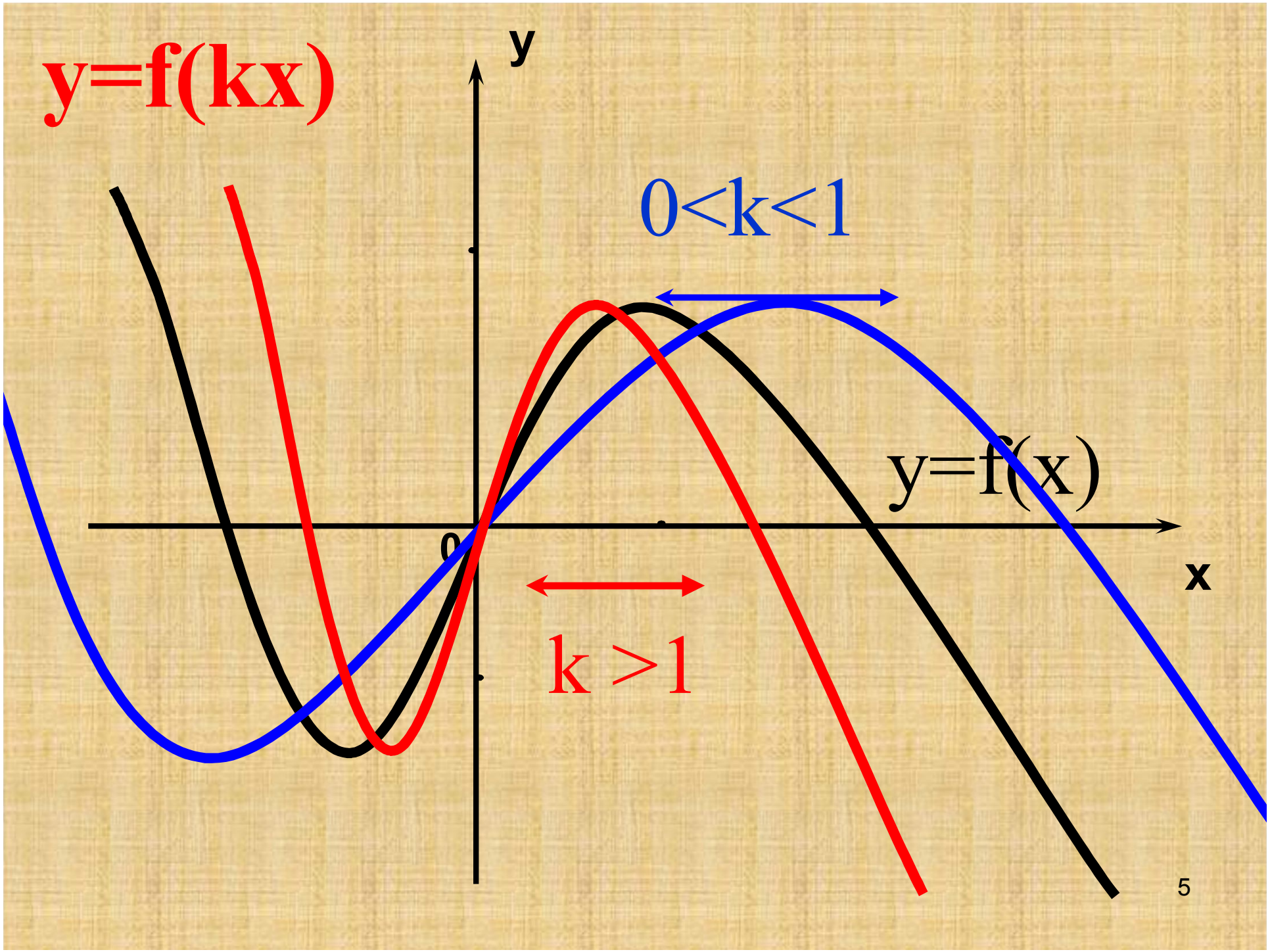
y=f(x)+b

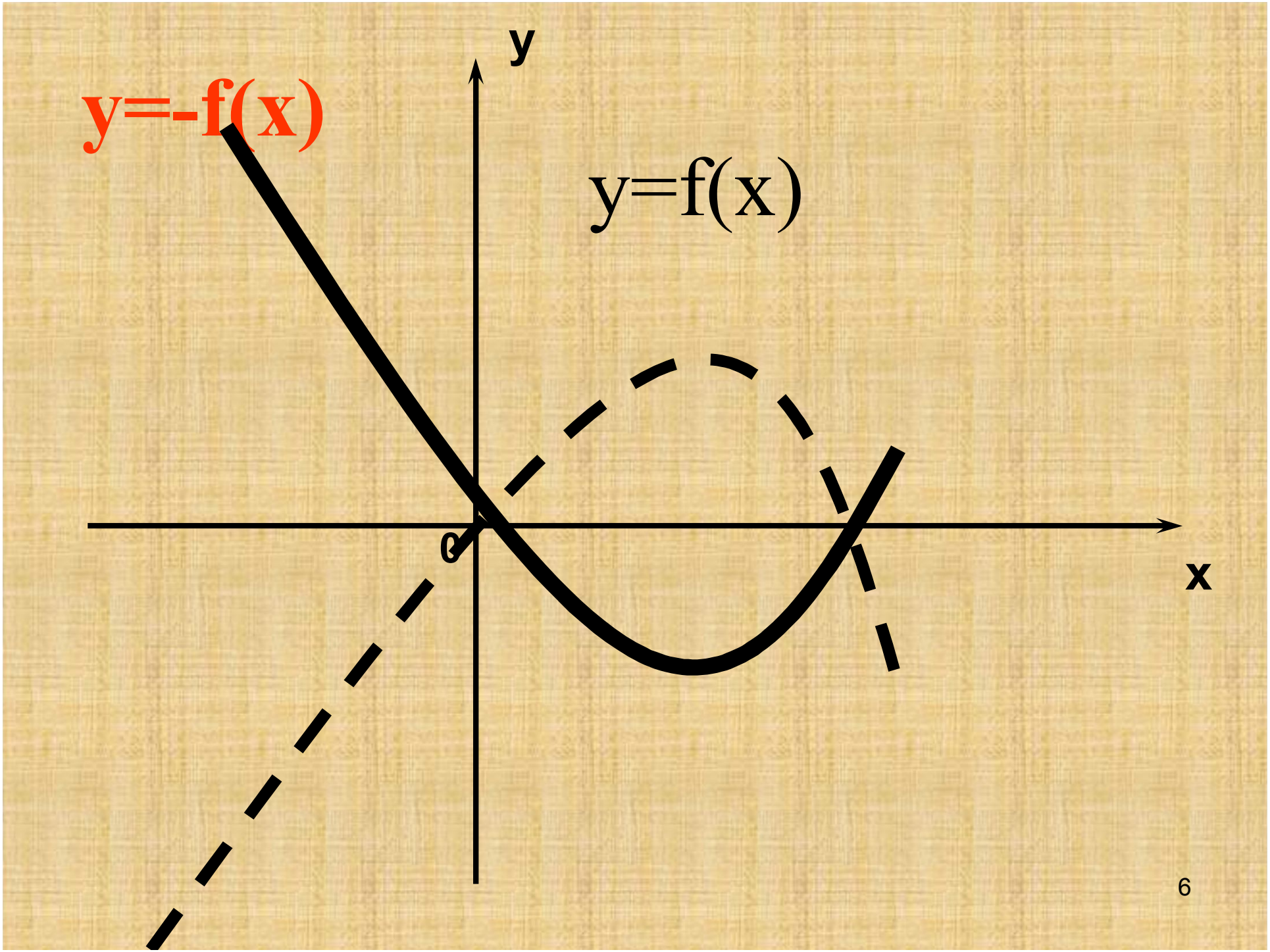


y=f(x - a)

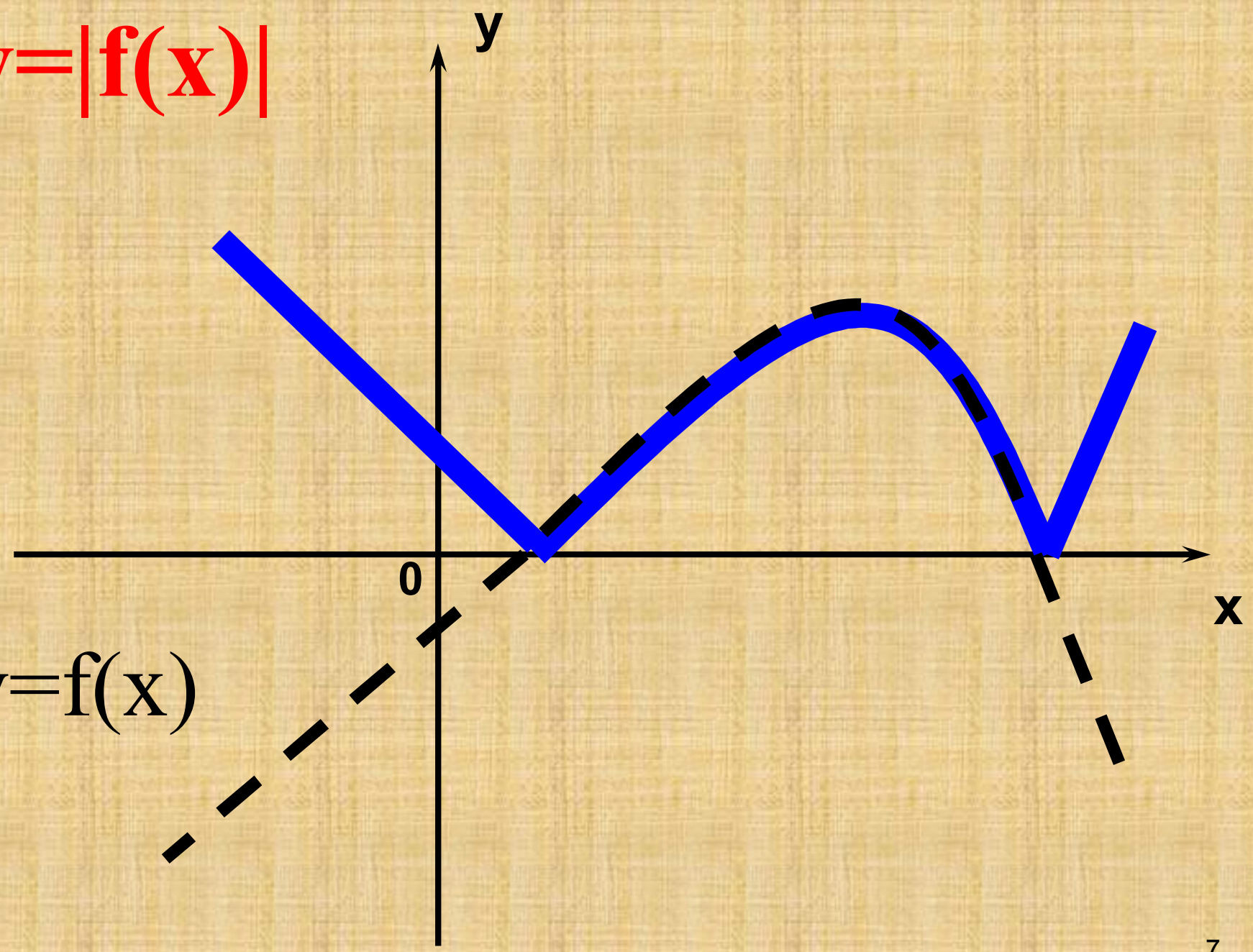



y=mf(x)
y
m>1
y=f(x)
0
x
0<m<1

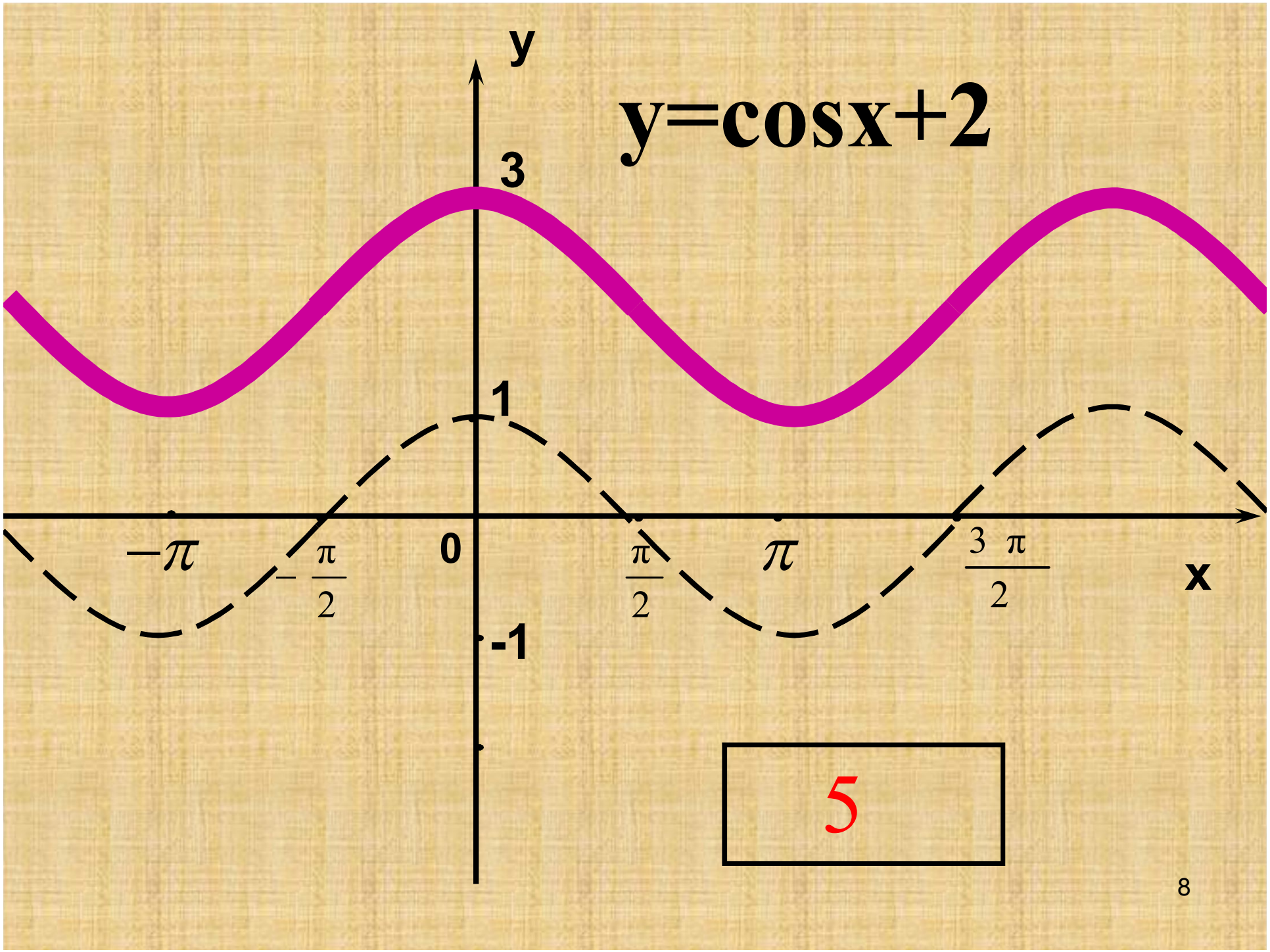

y=f(kx)
y
0<k<1
y=f(x)
0
x
k >1


y=-f(x)
y=f(x)
y
x
0

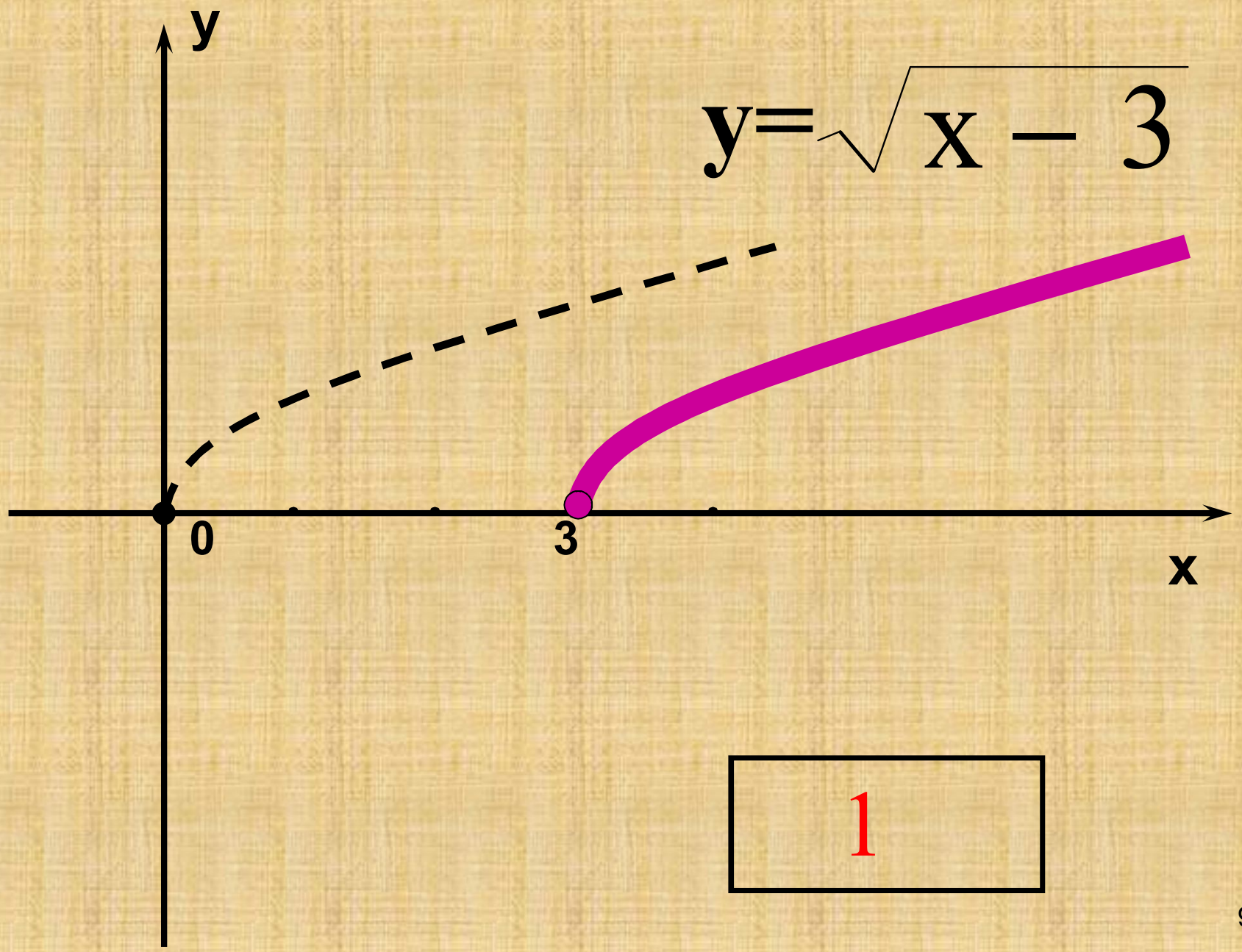
y=|f(x)|



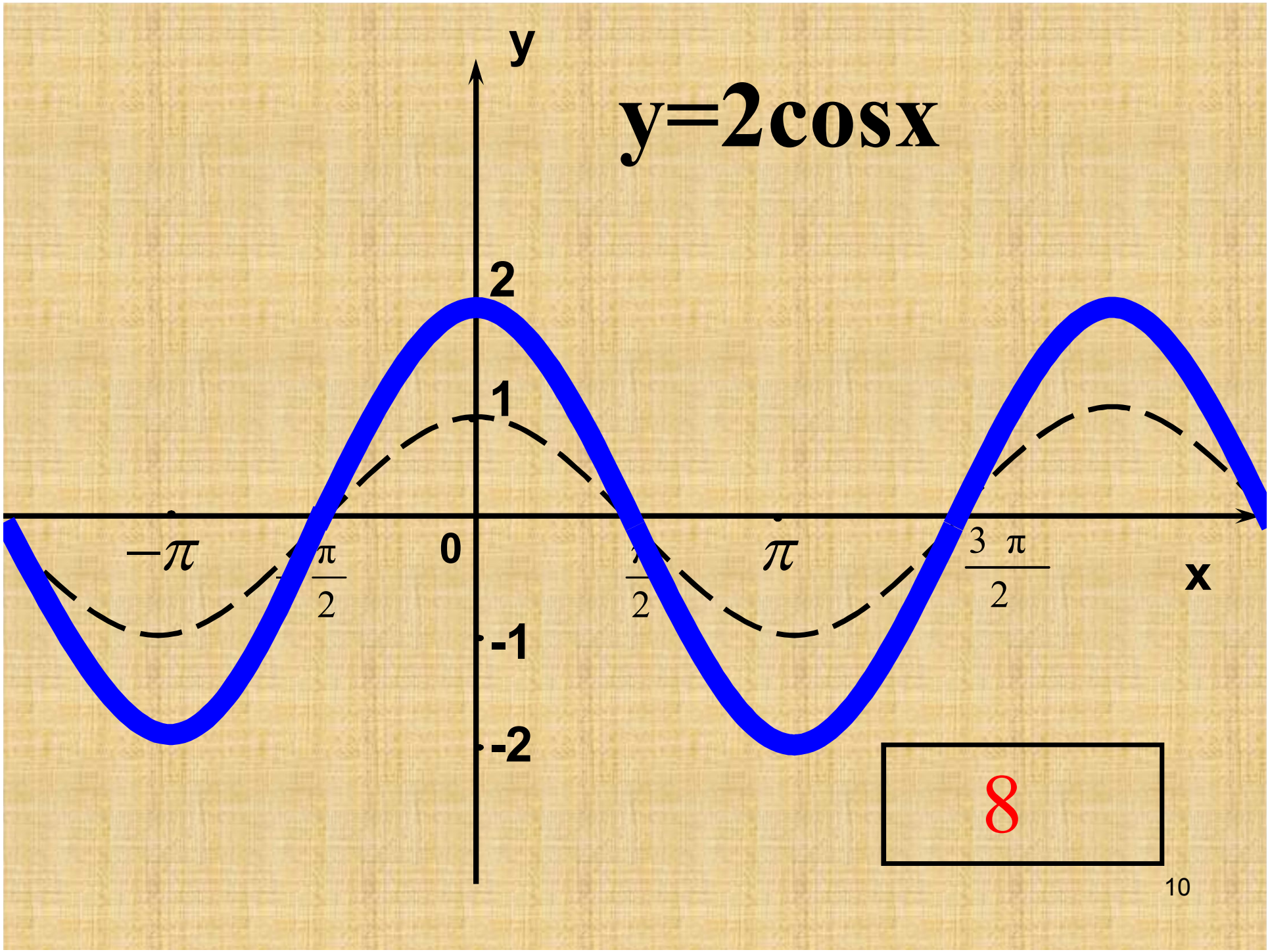
y=f(x)

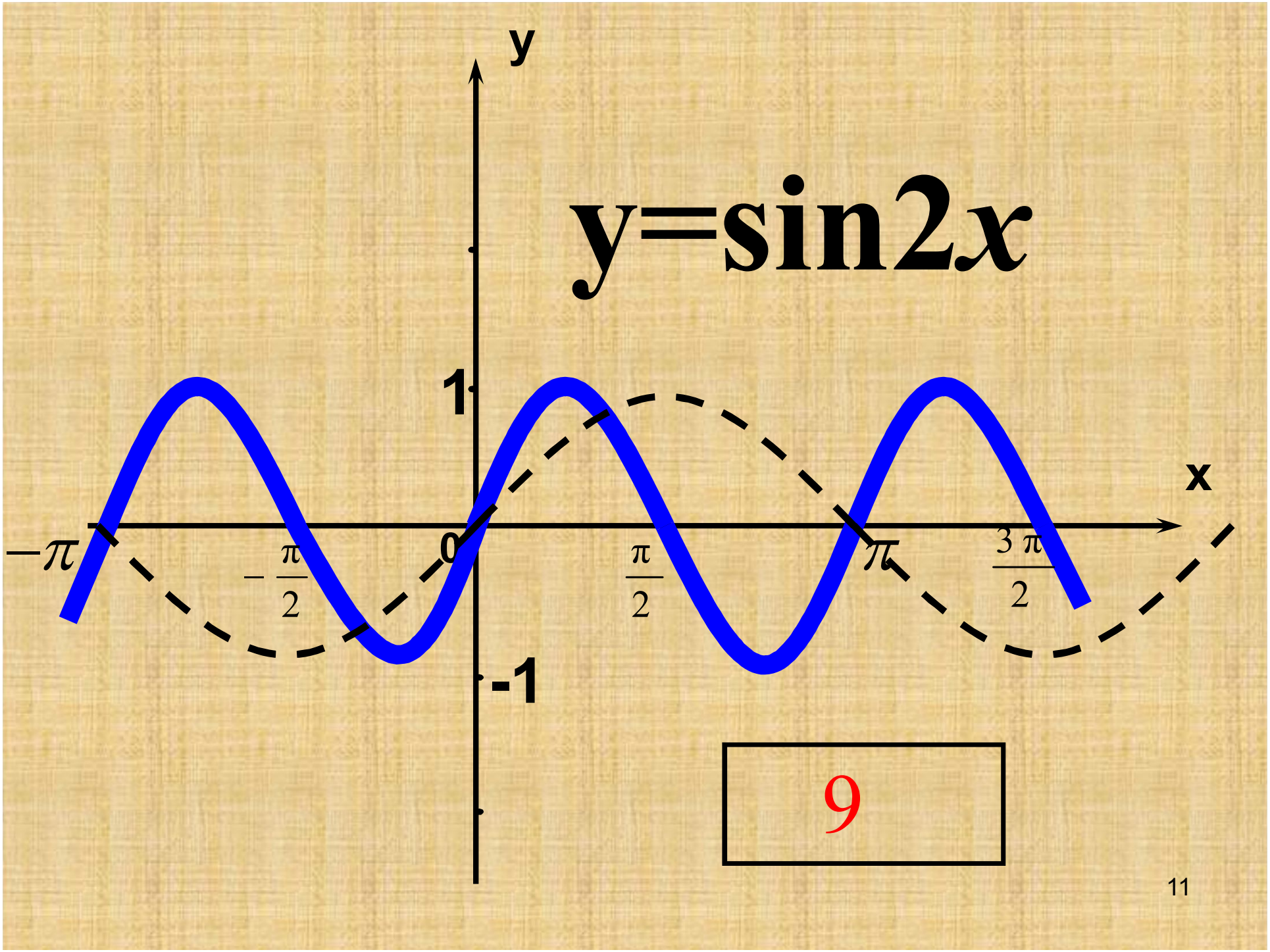


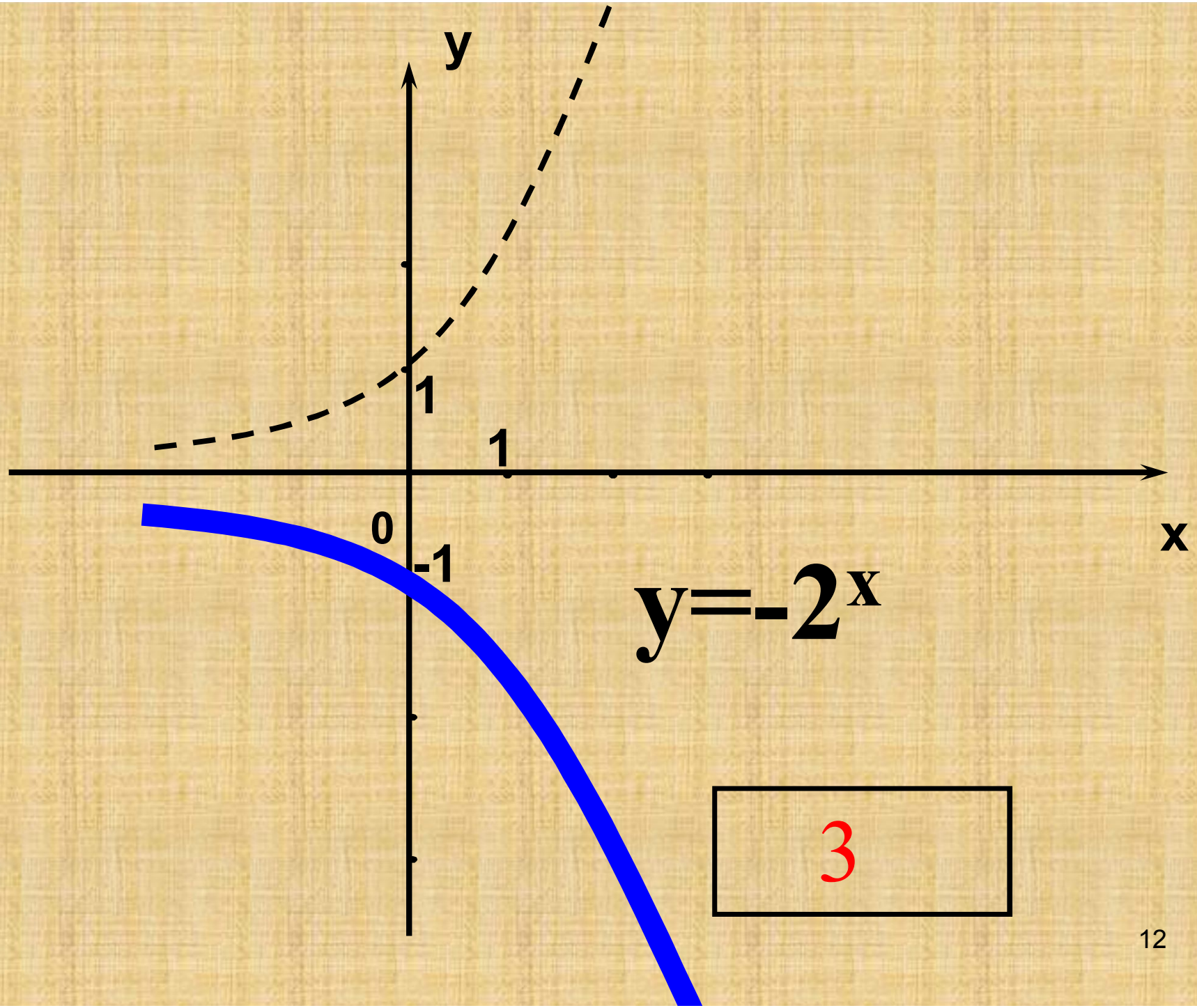
5



1

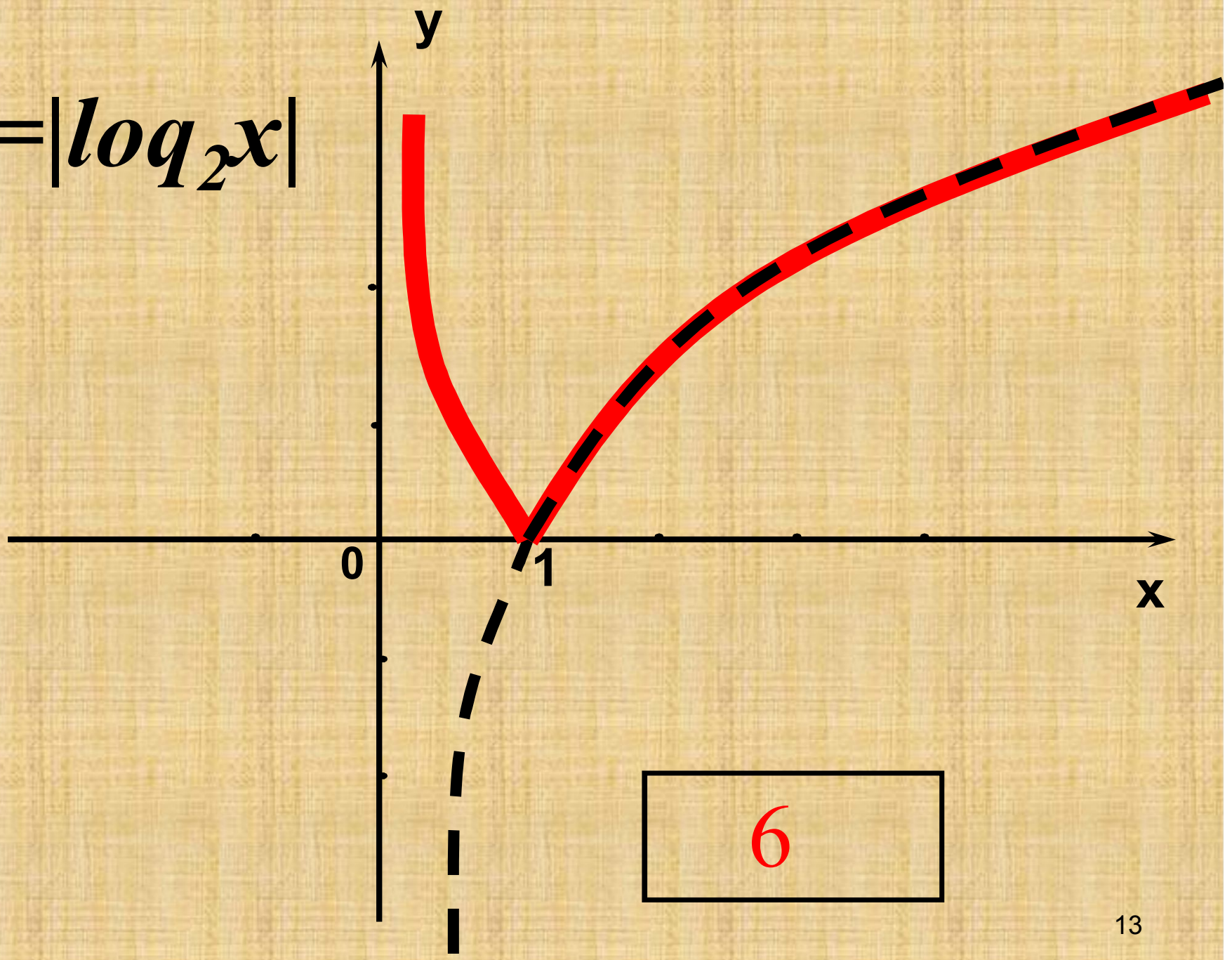

y=2cosx
y
2
1
-1
-2
0
x
$-\pi$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$
8


y
y=sin2x
1
-1
x
$-\pi$
$-\frac{\pi}{2}$
0
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$
9

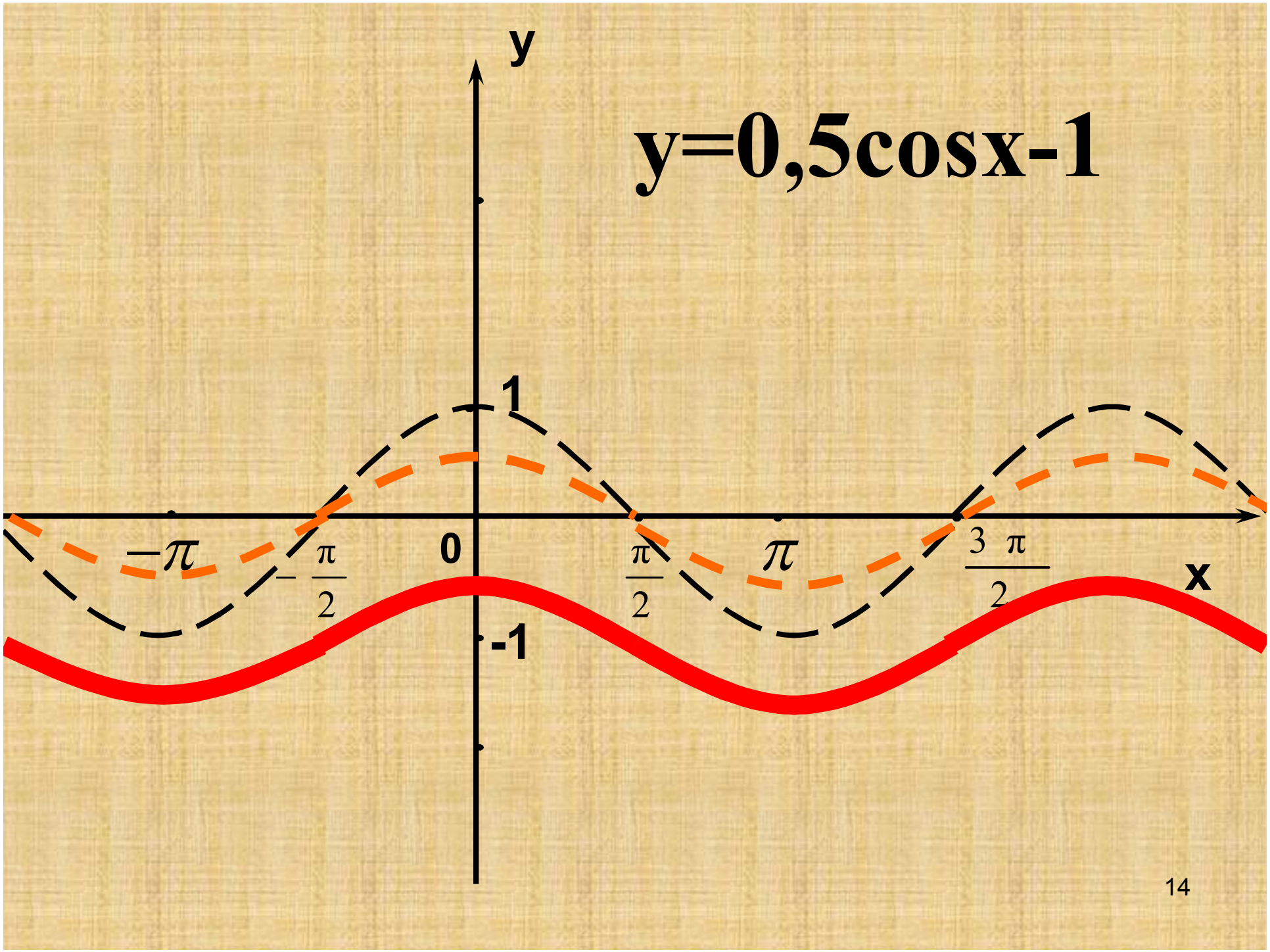


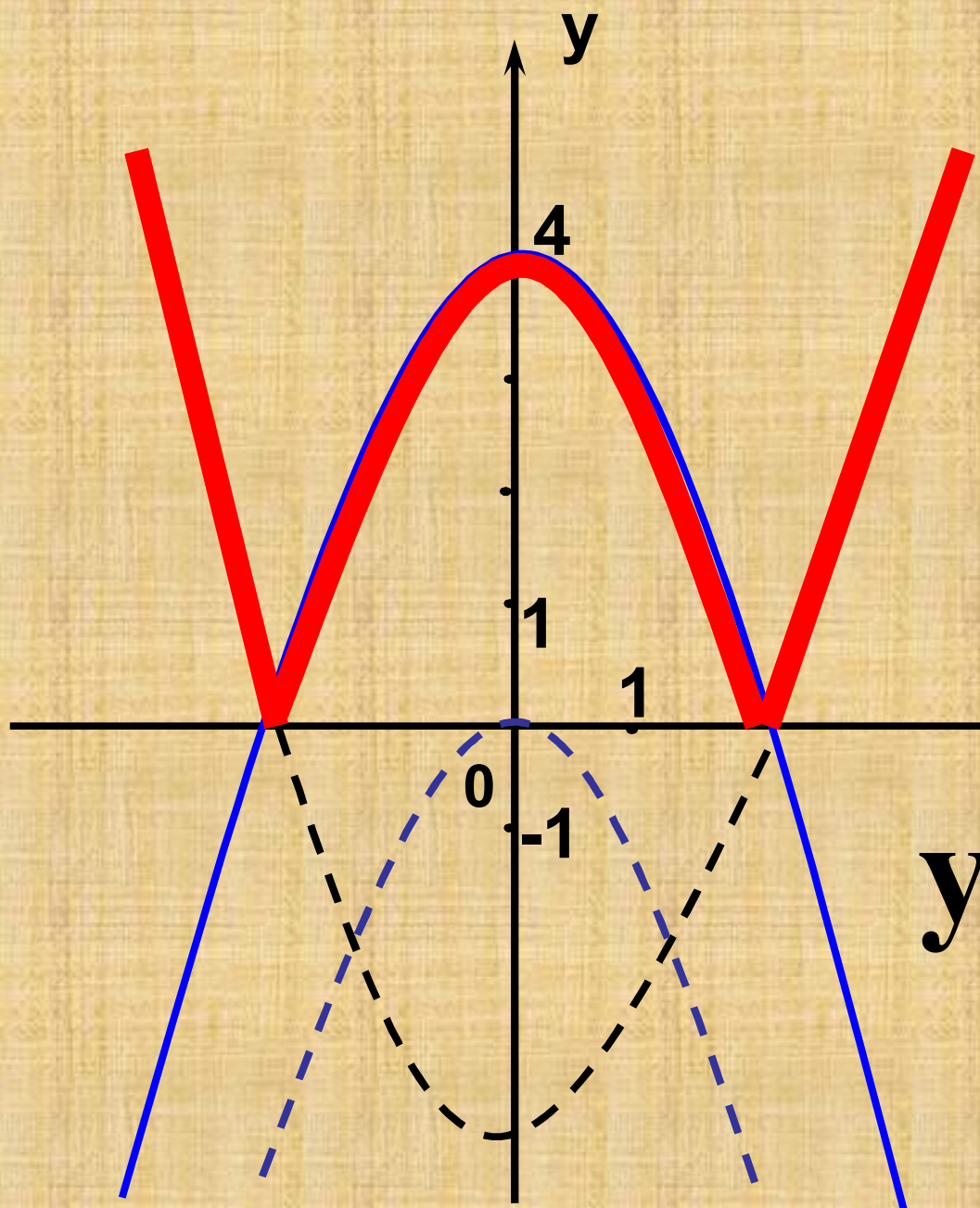
3

$y=|\log_2 x|$



6

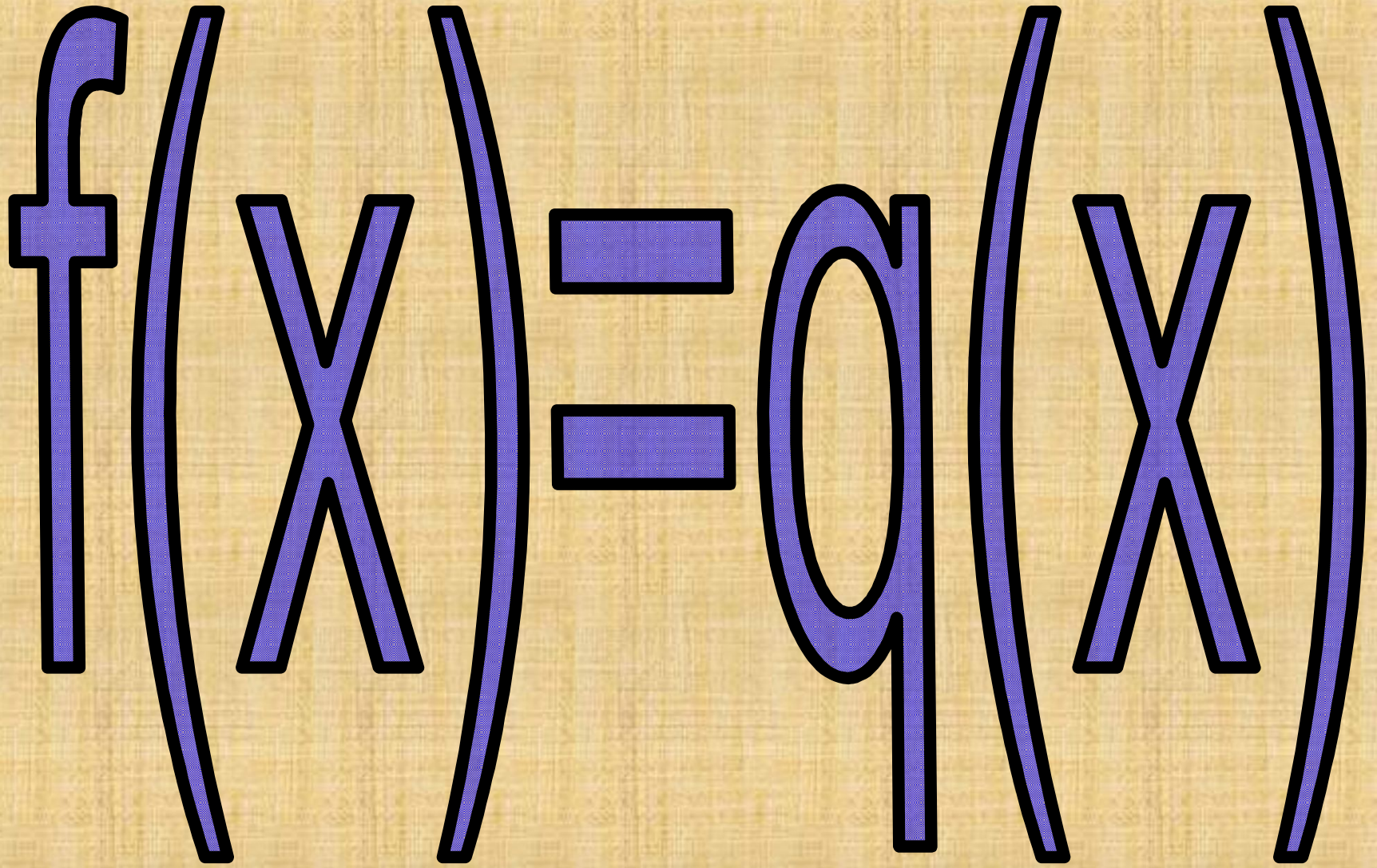

y=0,5cosx-1
y
1
-1
0
x
$-\pi$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$



$y=|-x^2+4|$

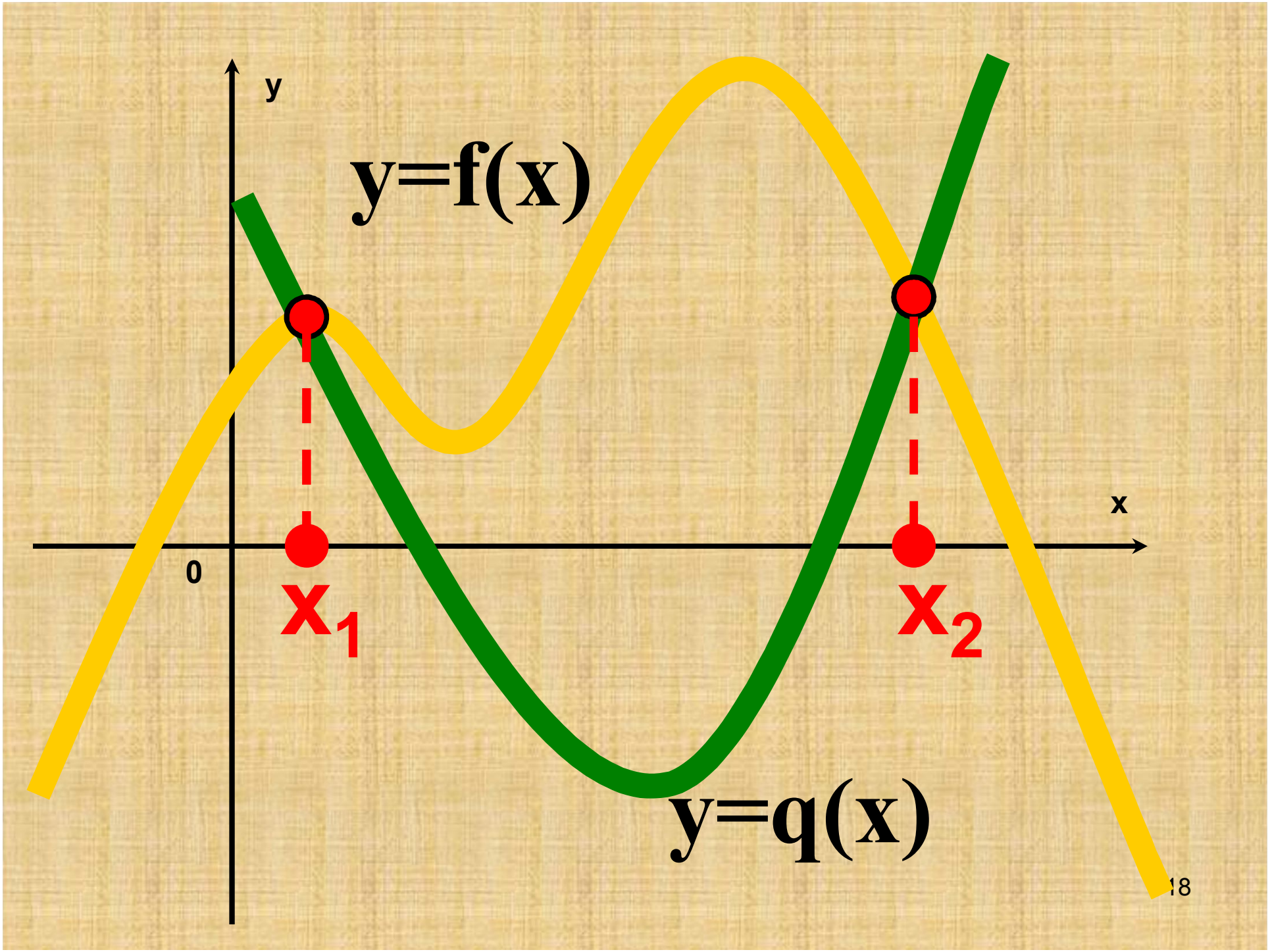
или

$y=|x^2-4|$


f(x)=g(x)

$$y=f(x)$$

$$y=g(x)$$


y
y=f(x)
x
0
x1
x2
y=q(x)

УРАВНЕНИЯ

1) $x^2+2x=7$

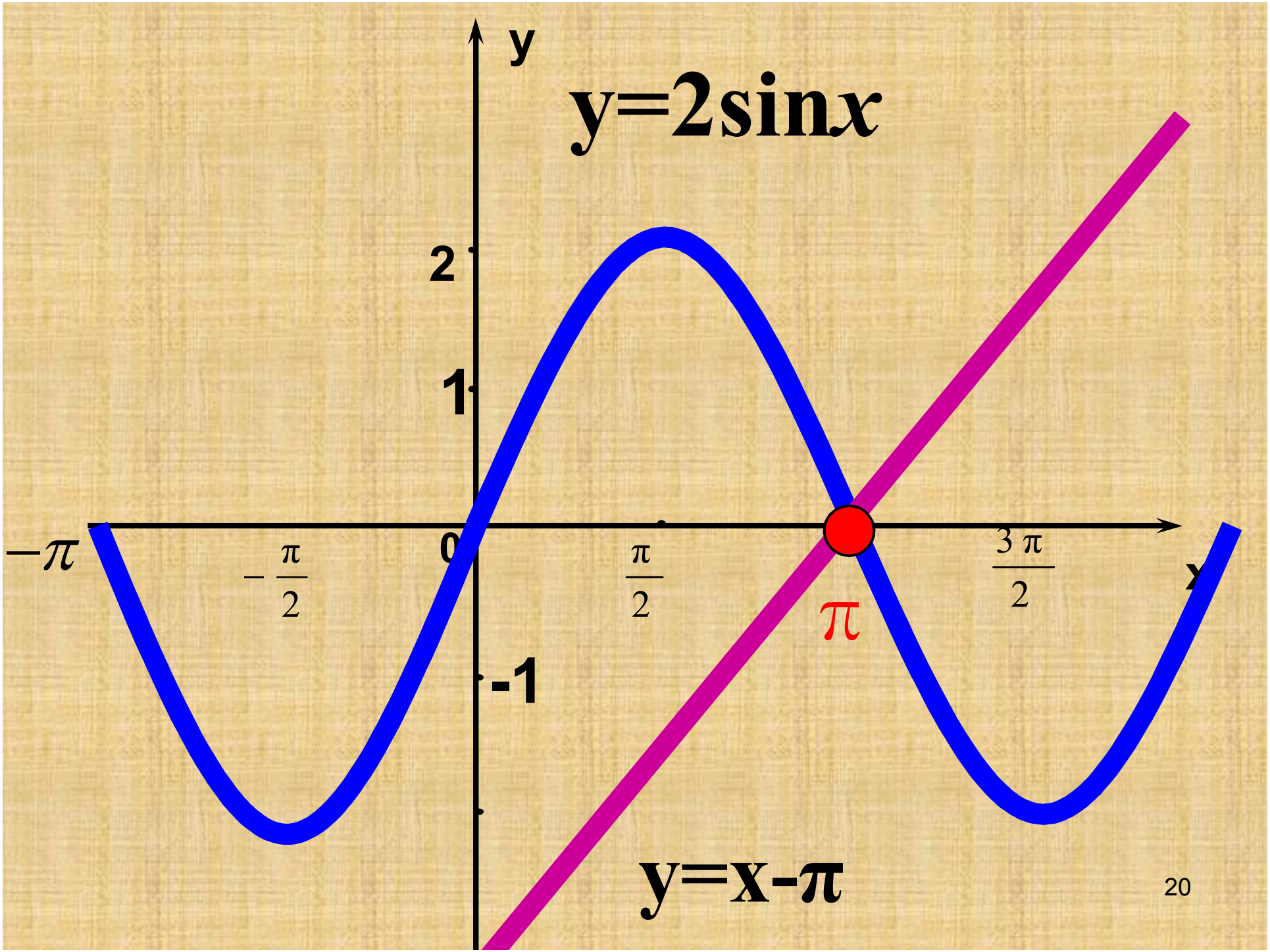
2) $2\sin x = x-\pi$

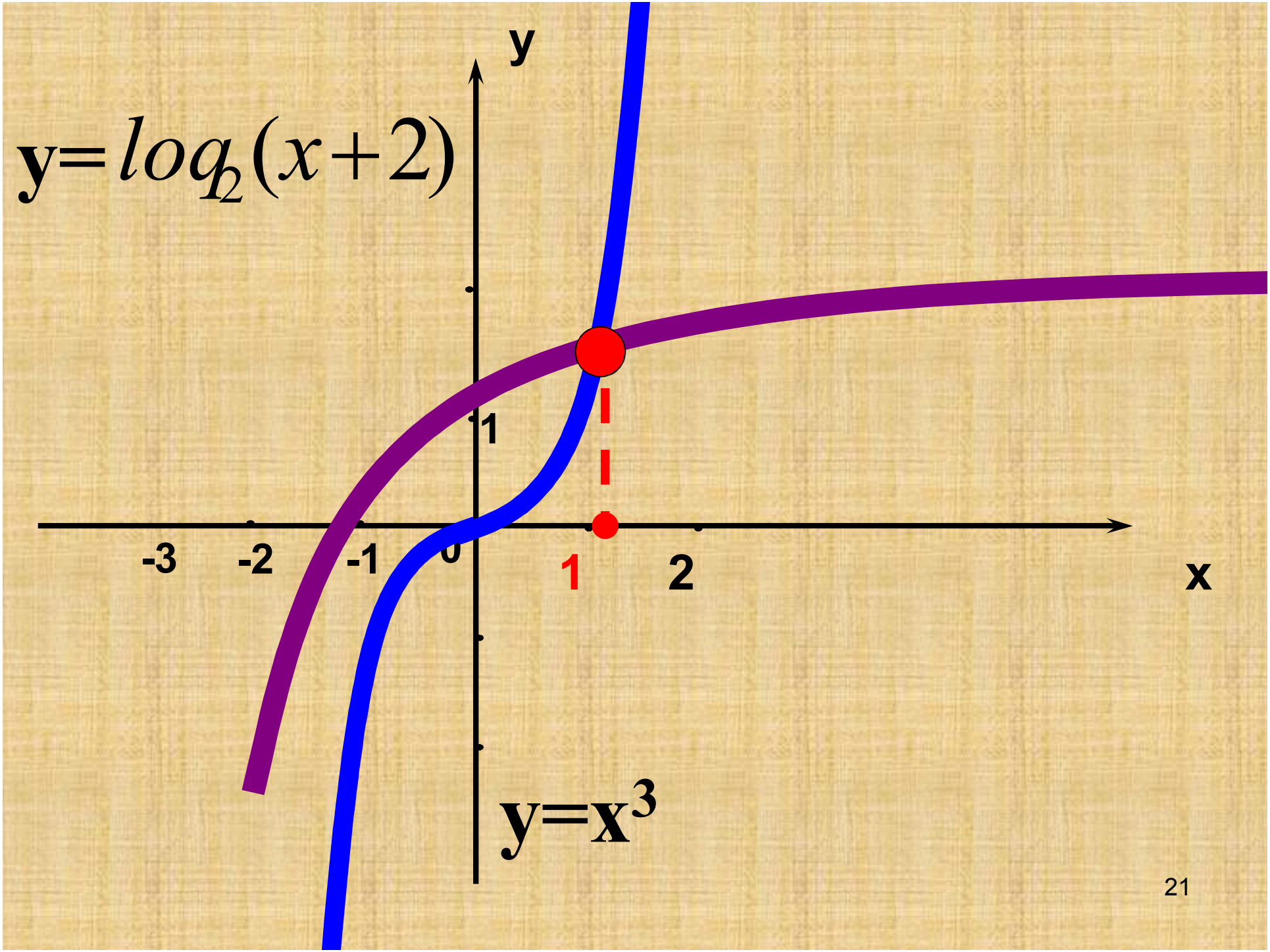
3) $\cos 2x - \sin x = \sin^2 x + 3$

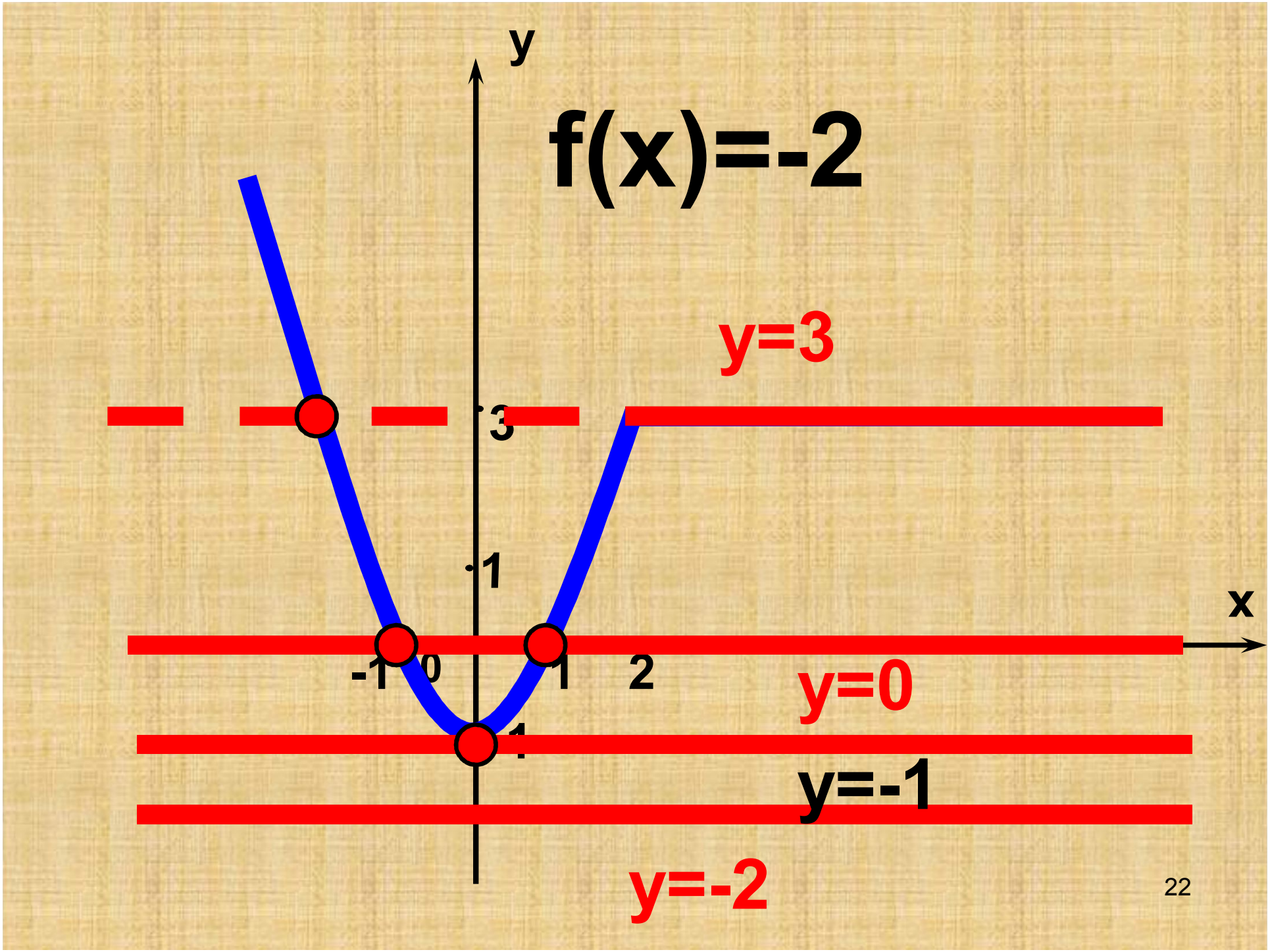
4) $4 \cdot 2^{3x} = 8$

5) $\log_2(x+2) = x^3$

6) $(x^4+2x^3-2)^{1/2} = 3x^3-x$


y
y=2sinx
2
1
-1
0
$-\pi$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$
x
y=x-π

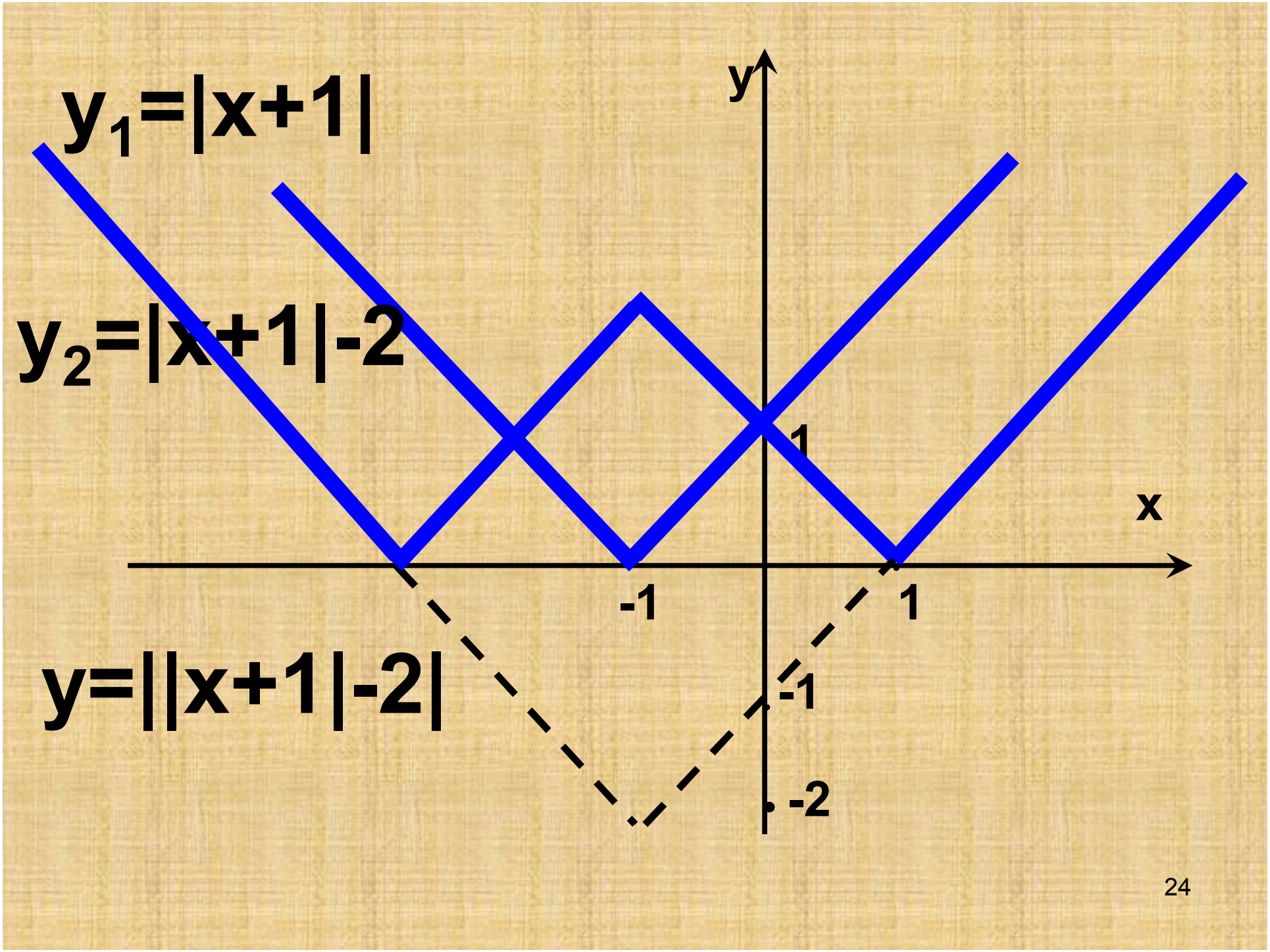

y=log2(x+2)
y
1
-3
-2
-1
0
1
2
x
y=x3

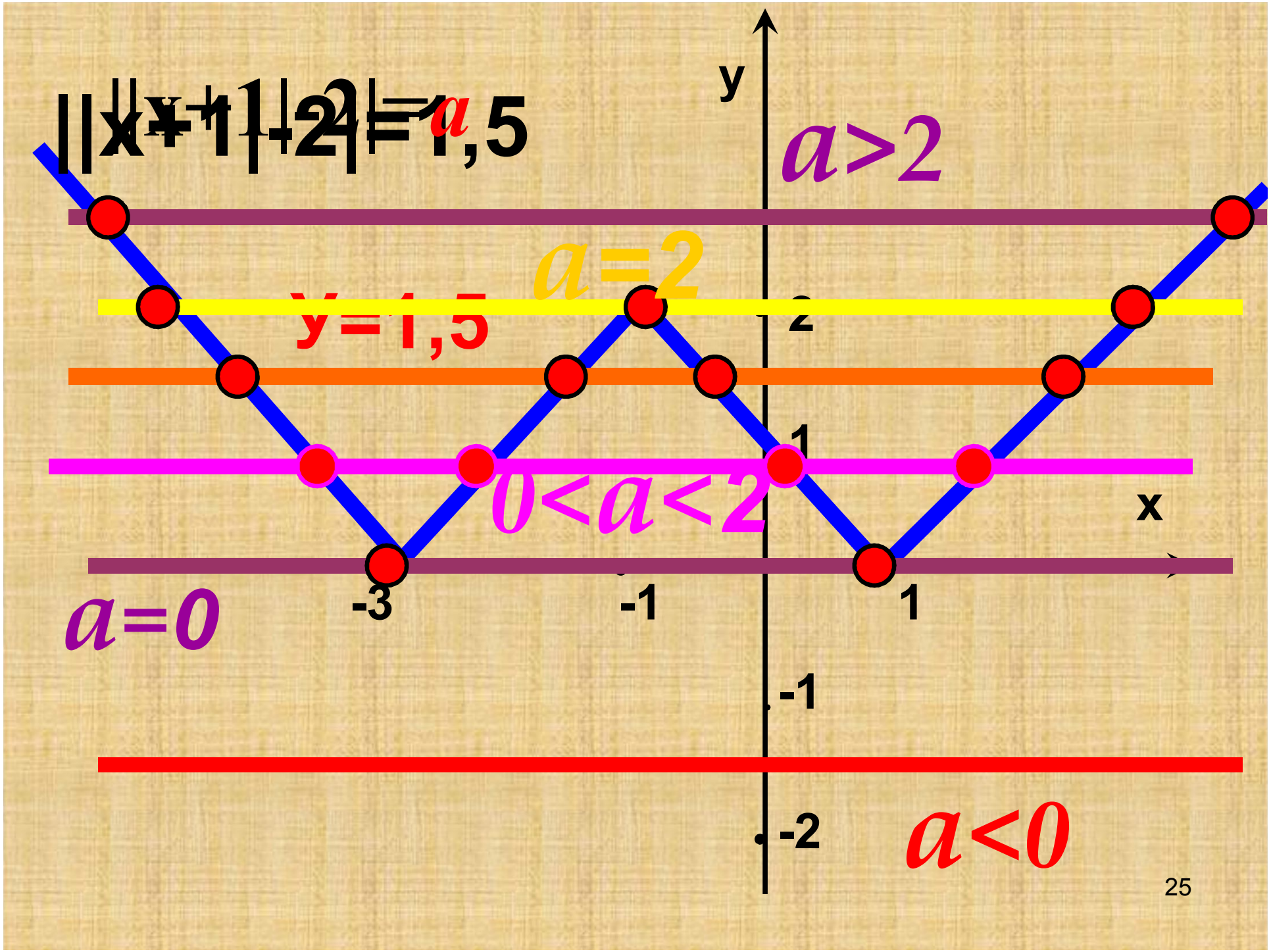

y
f(x)=-2
y=3
3
1
x
-1
0
1
2
y=0
-1
y=-1
y=-2

$$||x+1|-2|=1,5$$

$$y=||x+1|-2|$$

$$y=1,5$$


$y_1=|x+1|$
$y_2=|x+1|-2$
$y=||x+1|-2|$
y
x
1
-1
1
-1
-2


||x+1|-2|=a
y=1,5
a>2
a=2
0<a<2
a=0
a<0
y
x
2
1
-1
-2
-3
-1
1

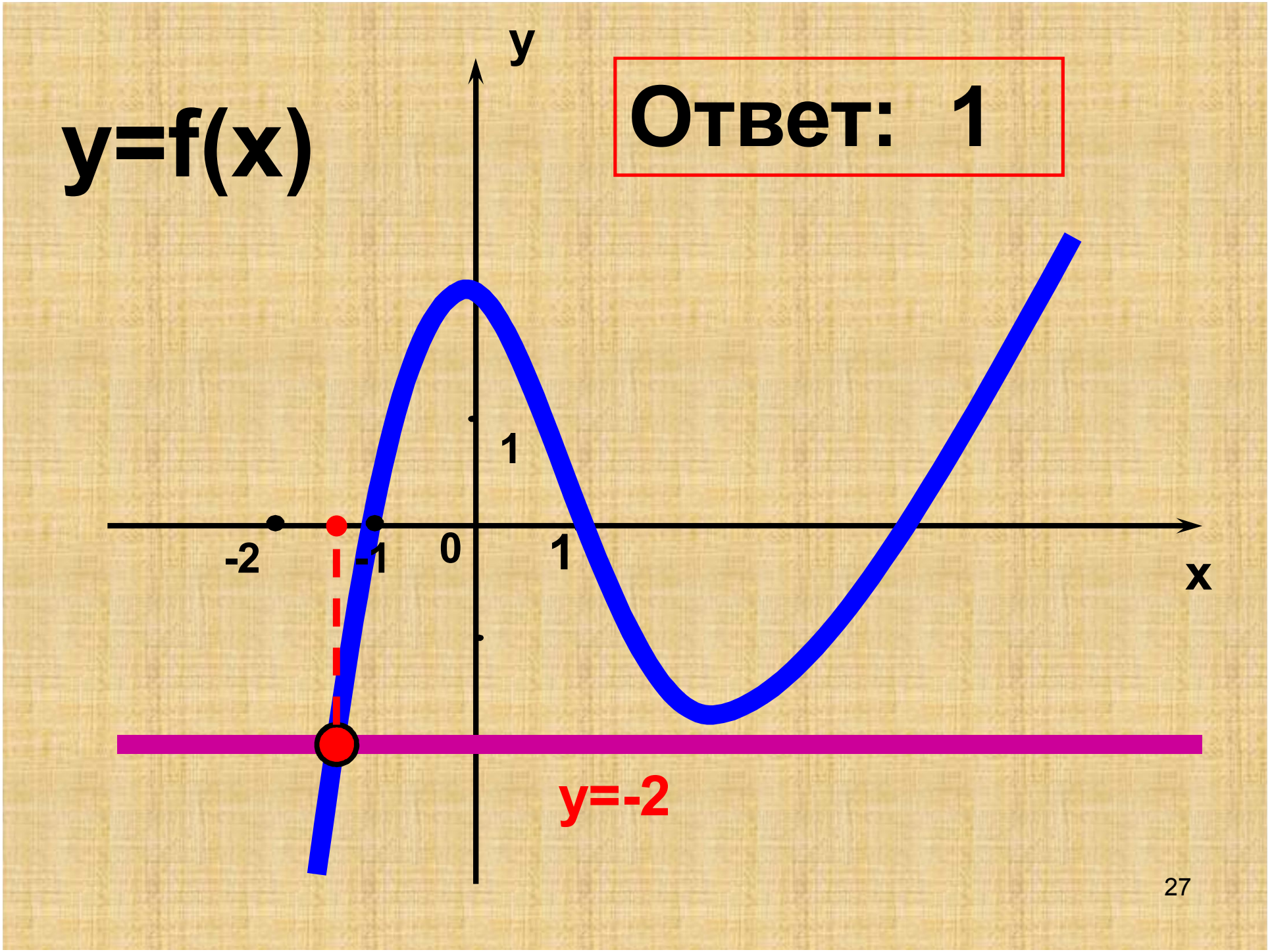
ОТВЕТ

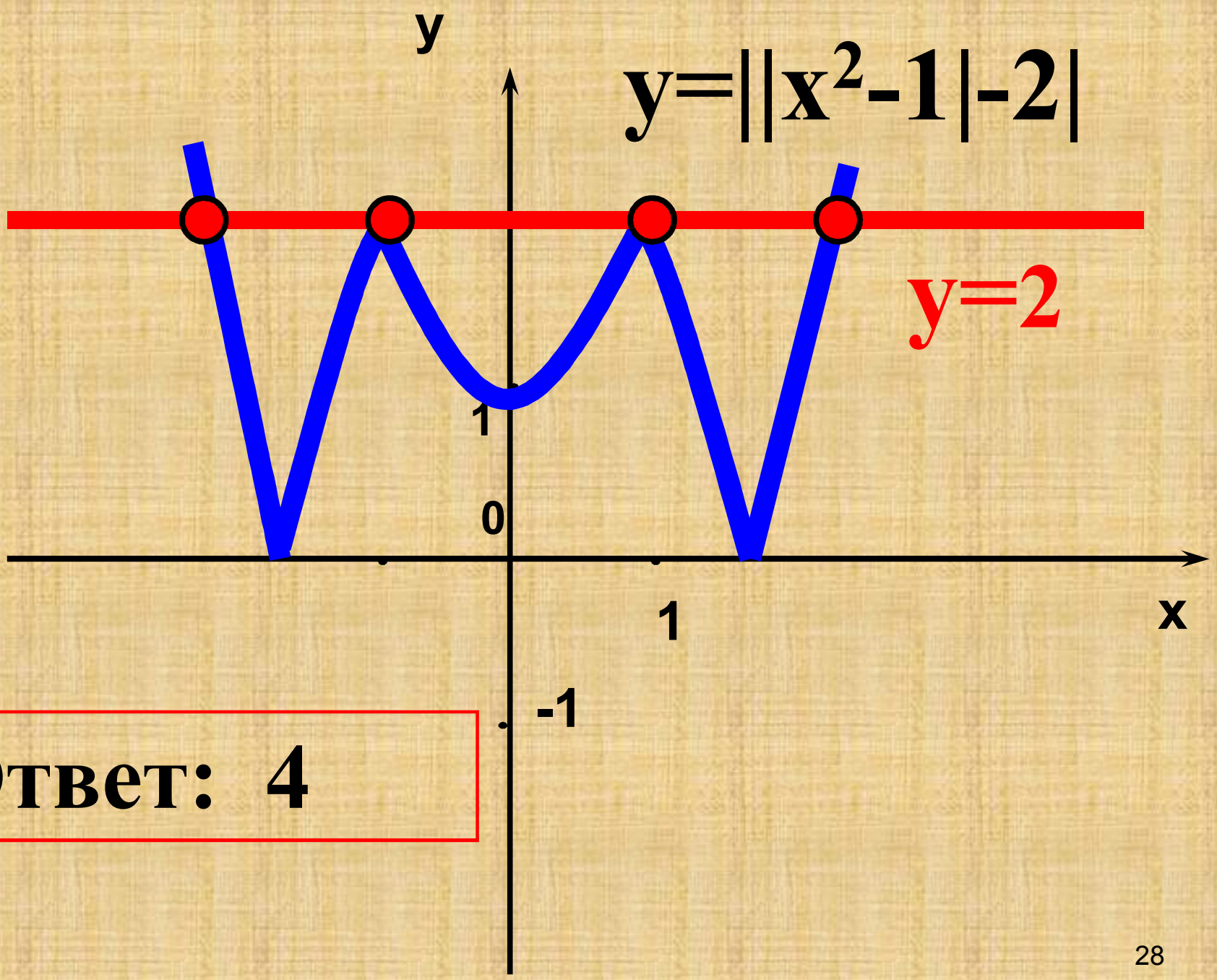
1)Если $a<0$, то уравнение корней не имеет;

2)если $a=0$ или $a>2$,то уравнение имеет 2 корня;

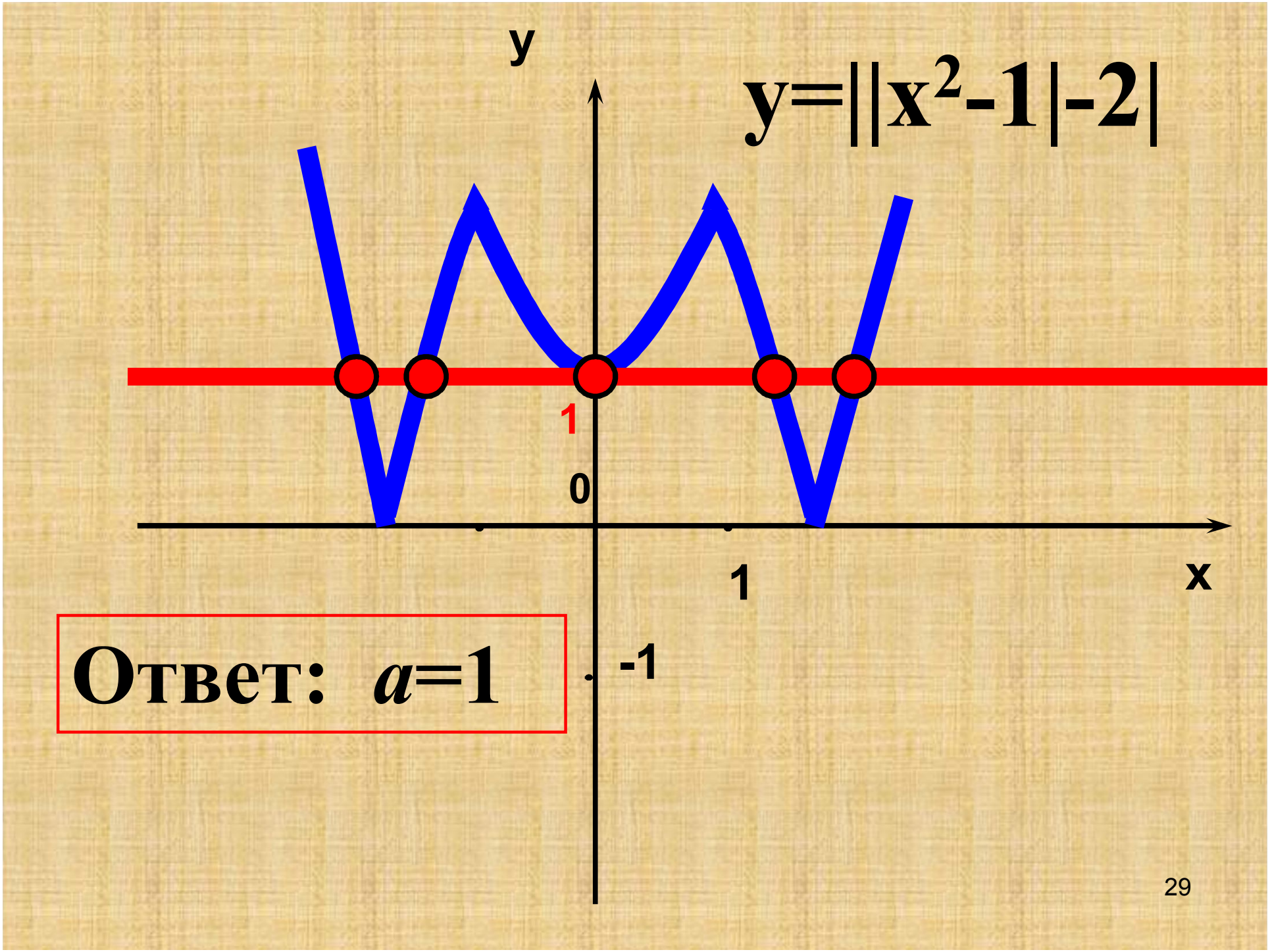
3)если $a=2$, то уравнение имеет 3 корня;

4)если $0<a<2$,то уравнение имеет 4 корня.


y=f(x)
Ответ: 1
y
x
1
-2
-1
0
1
y=-2



Ответ: 4



Ответ: $a=1$