

2012

Без тем за 11 клас



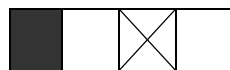
– 150

32

- 1.
- 2.
- 3.
- 4.

- 1.
- 2.
- 3.
- 4.

1 – 24



25 – 32

- 5.
- 6.

!

«

»

2012 .

1-20

,	!
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1.

« » - 2012 () 10 ,
 « », 50 .
 , 60 .

4%	5%	6%	30%	40%

2.

$$\sin\left(2x + \frac{\pi}{3}\right) = \frac{1}{2} \quad \left[-\frac{\pi}{2}; \frac{3\pi}{2}\right].$$

0	1	2	3	4

3.

$$\frac{7x^{10}}{y^9} : (21x^5y^3).$$

$\frac{3x^5}{y^6}$	$\frac{x^2}{3y^{27}}$	$\frac{x^2}{3y^{12}}$	$\frac{3x^{15}}{y^6}$	

4.

$$: a = \sqrt[3]{6}, b = \sqrt[4]{10}, c = \sqrt[6]{32}.$$

$c < b < a$	$b < a < c$	$a < c < b$	$b < c < a$	

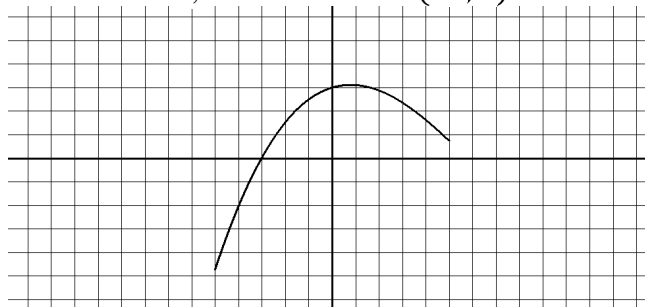
5.

$$y = f(x),$$

$[-5; 5].$

$x,$

$(2x, x)$



0	1	2	3	

6.

« » , « »
 10
 5
 « » 90

15	16	17	18	

7.

b , $\vec{a}(b; -2)$ $\vec{b}(2; -3)$

0	-3	3	$\frac{4}{3}$	

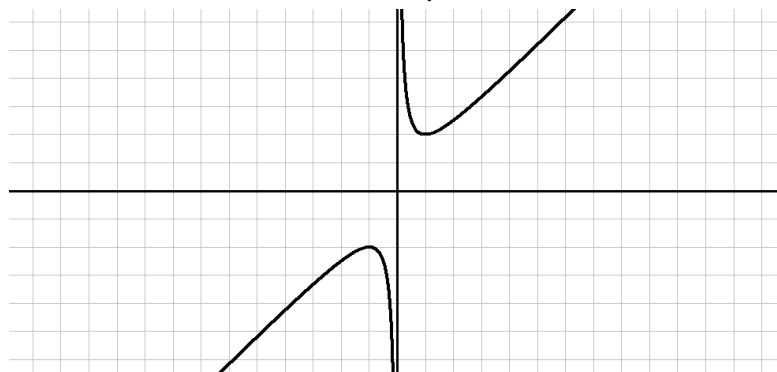
8.

« »
 $y = \cos x$
 , ,
 ?

$\leftarrow, \frac{\pi}{2}$	\leftarrow, π	$\rightarrow, \frac{\pi}{2}$	\rightarrow, π	

9.

$y = f(x)$



- (1) $f(x)$ –
- (2) $f(x)$ –
- (3) $f(x)$ – $(0; +\infty)$
- (4) $f(x)$ –
- (5) $f(x)$ –

(1), (3), (4)	(2), (4), (5)	(1), (4)	(2), (3), (5)	(1), (4), (5)

10.

$$\frac{(x-3)^2(x+2)}{x^3(x^2-x-2)} \leq 0.$$

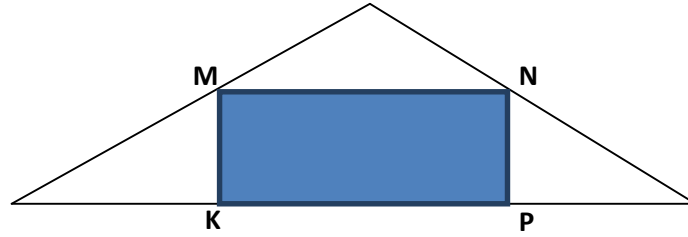
0	1	2	3	

18.

$MNPK$ –

, MN –

16.



4	8	12	16	

19.

- (1) ;
- (2) ;
- (3) , ;
- (4) - ;
- (5) - ;
- (6) - ;

2	3	4	5	

20.

« ».

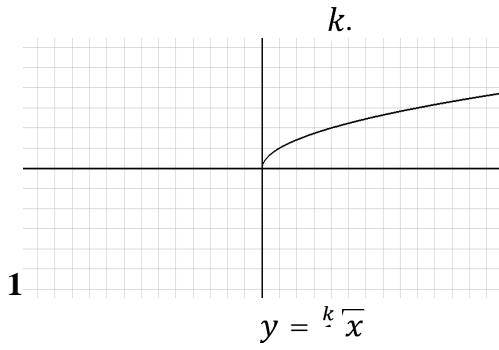
5 , - 4 , - 3 .

$2 \times 1,5$, $0,6 \times 2$, 0,4 .

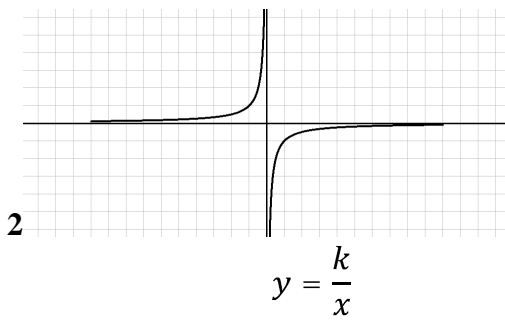
16,32	18,84	19,92	20,34	

21-24

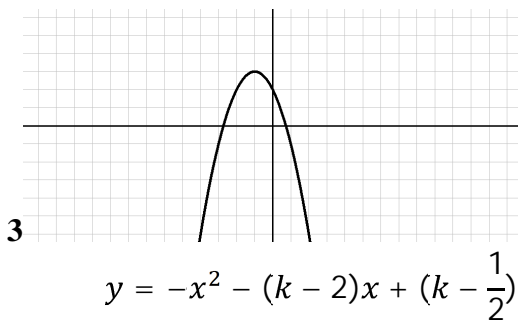
21.



$k = 3$

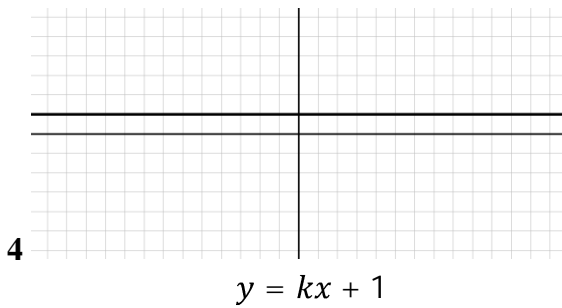


$k = -1$



$k = 0$

$k = 2$



$k = \frac{1}{2}$

1				
2				
3				
4				

22.

$a = 2,25.$

- 1 $\left(\frac{\sqrt{a}+1}{\sqrt{a}-1} - \frac{4\sqrt{a}}{a-1}\right) : \frac{\sqrt{a}-1}{a+\sqrt{a}}$ 0
- 2 $\frac{a^{\frac{5}{4}} \cdot a^{-2}}{(a^{\frac{3}{4}})^{-\frac{1}{2}}}$ $\frac{2}{3}$
- 3 $\frac{a}{a+2} - \frac{(a-2)^2}{2} \cdot \left(\frac{1}{a^2-4} + \frac{1}{a^2-4a+4}\right)$ 1
- 4 $\frac{\sin \pi a}{\cos \pi a} \left(\frac{1}{\sin^2 \pi a} - 1\right)$ 1,5

2

1					
2					
3					
4					

23.

- 1
 - 2
 - 3
 - 4
- 5
8

1					
2					
3					
4					

24.

$ABCD$

$B = 60^\circ$
 $O.$

$R -$
 $BCD.$

3

$BOC, BH -$

- 1 AB
- 2 BD
- 3 R
- 4 BH

- 4 $\sqrt{3}$
- 6
- 6 $\sqrt{3}$
- 2 $\sqrt{3}$
- 12

1					
2					
3					
4					

25-32.

25. $\frac{1}{x} + \frac{1}{y} = \frac{1}{3}$, $\frac{1}{x} - \frac{1}{y} = \frac{1}{7}$
 Find x and y .
 : _____

26. $\sqrt{8x^2 - 7} = 3x - 4$?
 : _____

27.
$$\begin{cases} \frac{x}{y} - \frac{y}{x} = -\frac{8}{3} \\ 4y - 3x = 13 \end{cases}$$

 Find $x_0 \cdot y_0$, $(x_0; y_0)$.
 : _____

28. $\frac{4x-4}{x} + \frac{x^2+4}{x^2+x} = \frac{6+x}{x+1}$
 : _____

29. In triangle ABC , medians AA_1 and BB_1 intersect at point M .
 $AB = 10$, $MA_1 = 3$, $BM = 8$.
 Find BC .
 : _____

30. In triangle ABC , $\angle A = \alpha$, $\angle B = \beta$.
 Point M is on BC such that $AM \perp BC$.
 Find BC if $AH = 5$, $AM = \beta$.
 : _____

31. Find a if $|\sqrt{a+2} - a| = \sqrt{a+2} - a$.
 : _____

32. Find x (in degrees) if $x^2 - 2x + 3 = 2 \left(1 - \sqrt[4]{x^4 - x^2 \sin(\pi x) + x^3 + 2 \cos(\pi x) - \sqrt{x-1}} \right)$.
 : _____