8-

8.1 a b , $a \neq b$ $a^2 + \dfrac{1}{b} = b^2 + \dfrac{1}{a}.$,

a b .

$: a^2 - b^2 = \dfrac{1}{a} - \dfrac{1}{b} = \dfrac{b-a}{ab}$, $(a-b)(a+b) = -\dfrac{a-b}{ab},\ (a-b \neq 0),$

$a + b = -\dfrac{1}{ab}, \quad ab(a+b) = -1.$

a b $>0,$ $ab(a+b) > 0.$

8.2 ,
$t \geq 0$ $y = t \cdot x + 1,$ $y = -x + 2t.$
, $x = 2$
(.. $x \geq 2$).

$:$,
$y = t \cdot x + 1$ $y = -x + 2t$ $t \geq 0$ 2. $:$

$tx + 1 = -x + 2t, \quad (t+1)x = 2t-1, \quad x = \dfrac{2t-1}{t+1}.$

$:$

$\dfrac{2t-1}{t+1} = \dfrac{2(t+1)-3}{t+1} = 2 - \dfrac{3}{t+1} < 2, \quad .. \quad <2$.

8.3 m n , $88m = 81n$. ,
$m+n$.

$:$ 88 81 . $88 \cdot m = 81 \cdot n$
, $88 \cdot m$ 81. 88 81
, 1, 81 m: $m = 81 \cdot t,$ $t -$
. $88 \cdot 81 \cdot t = 81 \cdot n,$ $n = 88 \cdot t.$
$m + n = 81 \cdot t + 88 \cdot t = 169 \cdot t = 13^2 \cdot t.$, $m+n \geq 169$ $m+n$
13, .. $m+n$ – .

8.4 . ,
, $N.$, $AN{=}AO.$
$:$
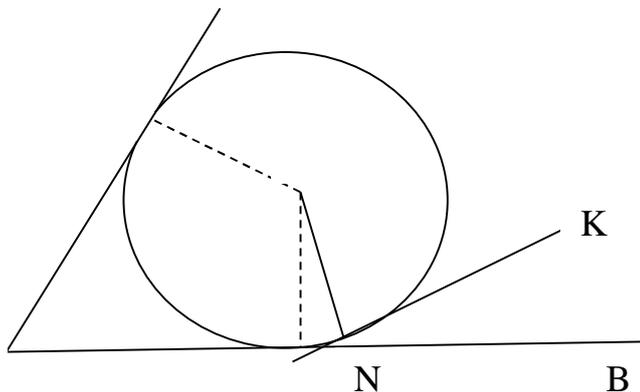
ANK. NO – ANK:
$\angle ANO = \angle KNO.$ $\angle KNO = \angle NOA$

N OA $NO.$, $\angle ANO = \angle NOA.$,

N $= N.$

8.5   0.   .

,

10,

.   ,   .

( )

, . .   ,   ,

?

:   10 (10

1000   11).

, $1 \le \ \le 10$,

$11 - $, $1 \le 11 - \ \le 10$.

11.

10, 10+11, 10+2·11, …,10+k·11.   k=99

1000.

:   .