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Gaj5@yandex.ru

**Abstract:** This article is devoted to the experience of implementing the systemic and activistic approach in developmental learning of mathematics at the secondary level. The examples of systems of intrerrelated tasks that develop the logical thinking of pupils are presented.

**Key words:** State educational standart, system of problem tasks, research skills and competences.

1. « » « »

1.1. « » « ».

1.2. {27, 31, 3, 5, 6, 13, 1, 10, 7, 201, 4<sup>2</sup>, 55, 3<sup>4</sup>, 53, 105}.

1.3. {216, 375, 532, 4611, 32, 41, 39} «3» «9».

1.4. 6?

{3672, 5631, 2172, 531, 432, 2352}.

1.5. 1.4 12.

1.6. : 90; 24; 45.

?

« » « ».

1.7. « » « » . ?

1.8. : { (5<sup>4</sup> - 2 · (354 - 107)); (112 · 5 - 3); (8<sup>5</sup> + 2); (376<sup>5</sup> + 23<sup>2</sup>); (11<sup>4</sup> - 5) } .

- « » « » .

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. [1]

2.

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( )

2.1.

2.1.

. 1

$\triangle BDE (\angle D = 90^\circ, BD = h, BE = b),$   
 $\triangle BDF (\angle D = 90^\circ, BD = h, BF = m).$

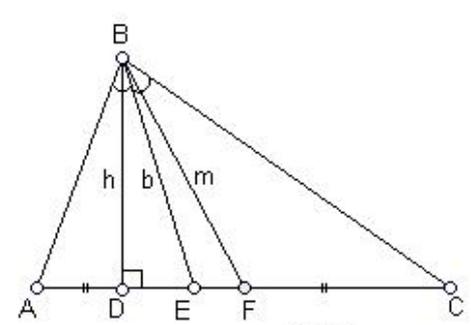


Рис. 1

2.1.1.  $\triangle MNK, N = 90^\circ, MN = h, MK = b.$  (  
 $\triangle MNQ, N = 90^\circ, MN = h, MQ = m)$

2.1.2.  $\tilde{S}(o, r),$

( . 2). ( )

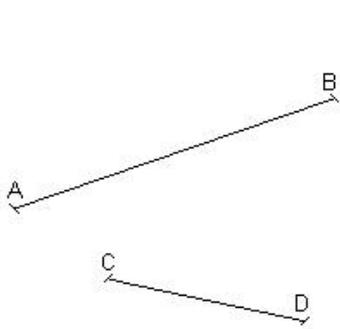


Рис. 2

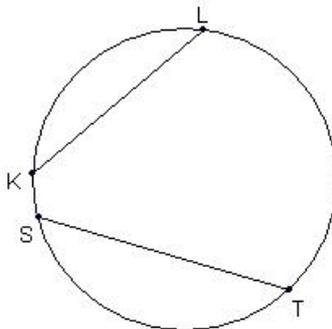


Рис. 3

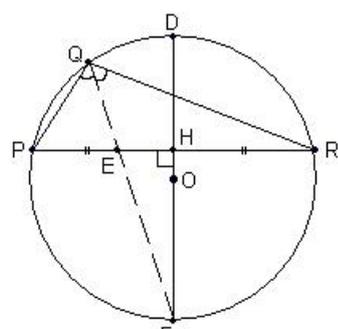


Рис. 4

2.1.3.

2.1.4.

$O \in FN$   $PH = HR$ .

2.1.5.

$BD \perp AC$ .

(. 3).

. 4

$QE$  -

$\angle PQR$ ,

. 5,

$\Delta ABC$ ,

$O$

$BE$

$\angle ABC$ ,  $BF$  -

$\Delta ABC$ ,

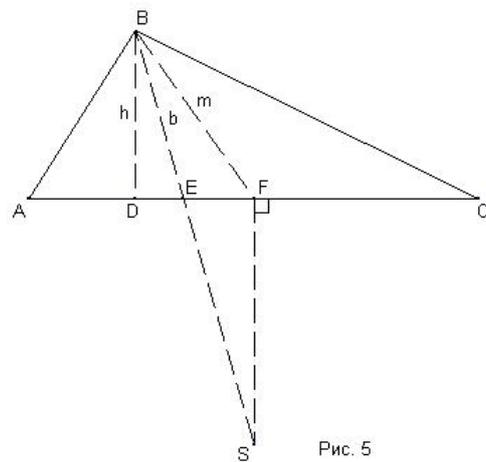


Рис. 5

2.1.)

(  
A B  
A,

B C.

- 1)  $n < b < m$
- 2)  $h > b, h > m$
- 3)  $h > b > m, h > m > b$

1. USM, 2002. - 520 с. ( )

2. . . , . . .

. . . : - , 2012. - 136 . /