MINISTERUL EDUCAȚIEI AL REPUBLICII MOLDOVA



Numele:
Prenumele:
Patronimicul:
Instituția de învățămînt:
Localitatea:
Raionul / Municipiul:

MATEMATICA (ÎN LIMBA ENGLEZĂ)

EXAMEN DE ABSOLVIRE A GIMNAZIULUI SESIUNEA SUPLIMENTARĂ / REPETATĂ

02 iulie 2014 Timp alocat – 120 de minute

Rechizite și materiale permise: pix de culoare albastră, creion, riglă, radieră.

Instrucțiuni pentru candidat:

- Citește cu atenție fiecare item și efectuează operațiile solicitate.
- Lucrează independent.

Îți dorim mult succes!

Numele și prenumele evaluatorului: _	 Punctaj total:

Annex

$$(a-b)(a+b) = a^{2} - b^{2}$$

$$(a+b)^{2} = a^{2} + 2ab + b^{2}$$

$$c^{2} = a^{2} + b^{2}$$

$$V_{prism} = A_{b} \cdot h$$

$$A_{rhombus} = \frac{1}{2} \cdot d_{1} \cdot d_{2}$$

$$ax^{2} + bx + c = 0, \qquad a \neq 0, \qquad x_{1} + x_{2} = -\frac{b}{a}, \ x_{1} \cdot x_{2} = \frac{c}{a}$$

Nr.	Items	Score
1.	Fill in the box with one of the symbols "<", ">" or "=", so that the statement becomes true. $ (\sqrt{3}-1)(\sqrt{3}+1) $	L 0 2
2.	On the picture, points A, B, C are situated on the circle of center O and $m(\angle AOB) = 140^\circ$. Write in the box the degree measure of the angle ACB . $m(\angle ACB) = \circ.$	L 0 2
3.	Consider the function $f: \mathbb{R} \to \mathbb{R}$, $f(x) = 2x + 6$. Fill in the box so that the statement becomes true. "A (\square ; \square) is the point of intersection of the graph of the function f with the ordinate axis."	L 0 1 2
4.	A tourist has travelled a distance of 20 km in two days. The first day he travelled 40% of the way and the rest of the distance he travelled the second day. Determine what distance the tourist travelled the second day. Solution:	L 0 1 2 3 4
	Answer:	

5.	Calculate the value of the expression $\frac{2^{10}+4}{2^8} - \frac{1}{2^6}$. Solution: Answer:	L 0 1 2 3 4
6.	Determine all real values of x , such that the sum of expressions $2x - 1$ and $4 - 5x$ is positive. Solution:	L 0 1 2 3 4
7.	The area of a rhombus is equal to 120 cm² and the length of one diagonal is equal to 24 cm. Determine the length of the side of the rhombus. Solution: Answer:	L 0 1 2 3 4 5

8.	The numbers a and b are directly proportional to the numbers 7 and 5. Determine the numbers a and b , if $a-b=12$. Solution:	L 0 1 2 3 4 5
9.	Determine the sum of integer solutions of the inequality $4x^2 - 4x - 3 \le 0$. Solution:	L 0 1 2 3 4 5
	Answer:	
10.	The diagonal section of a right square prism is a square with the length of the side equal to 2 cm. Determine the volume of the prism. Solution:	L 0 1 2 3 4 5
	Answer:	

Consider the function $f: \mathbb{R} \to \mathbb{R}$, $f(x) = x^2 + px + q$. Find all real	11.	Let x_1 and x_2 be the real solutions of the equation $2x^2 - 4x - 3 = 0$. Find the value of the expression $x_1^2 + x_2^2$. <i>Solution:</i>	L 0 1 2 3 4 5
values of p and q , such that the point $A(-2; 2)$ belongs to the graph of the function f and $x = -3$ is a zero of the function f . Solution:		Answer:	
Answer:	12.	values of p and q , such that the point $A(-2; 2)$ belongs to the graph of the function f and $x = -3$ is a zero of the function f . Solution:	L 0 1 2 3 4 5