Numele:

_____

Prenumele:

_____

Patronimicul:

_____

Instituția de învățămînt:

_____

_____

Localitatea:

MINISTERUL EDUCAȚIEI
AL REPUBLICII MOLDOVA

Agenția Națională pentru
Curriculum și Evaluare

MATEMATICA (ÎN LIMBA ENGLEZĂ)

EXAMEN NAȚIONAL DE ABSOLVIRE A GIMNAZIULUI
SESIUNE SUPLIMENTARĂ / REPETATĂ

04 iulie 2016
Timp alocat – 120 de minute

Rechizite și materiale permise: _pix cu cerneală 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

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

$$V_{cone} = \frac{1}{3}\pi R^2 H$$

$$V_{rectan.paral.} = abc$$

Nr.	Items	Score
1.	Fill in the box so that the statement becomes true. "If $a = 3 - 6$ and $b = \dfrac{15}{2} \cdot \dfrac{4}{10}$, then the value of the ratio $\dfrac{a}{b}$ is the number ☐ ."	L 0 3
2.	On the picture, the isosceles triangle ABC, where $AB = BC$ and $m(\angle ABC) = 110°$, is represented. Write in the box the degree measure of the angle BAC. $m(\angle BAC) = $ ☐ . 	L 0 3
3.	On the picture, the graph of the function $f : \mathbb{R} \to \mathbb{R}$, $f(x) = ax^2 + bx + c$, $a \neq 0$, is represented. Using the picture, fill in the box so that the statement becomes true. "The number of solutions of the equation $f(x) = 0$ is equal to ☐ ." 	L 0 3
4.	A book costs 80 lei. During a promotion the price of the book will be decreased by 15%. Determine how many lei it will be decreased. *Solution:* *Answer:*_____.	L 0 1 2 3 4

5.	Calculate: $\frac{1}{\sqrt{3}-\sqrt{2}} + \frac{1}{\sqrt{3}+\sqrt{2}} - 2\sqrt{3}$. *Solution:* *Answer:* _____.	L 0 1 2 3 4
6.	Let A be the set of real solutions of the equation $3x^2 - 2x - 8 = 0$. Determine the set $A \setminus \mathbb{Z}$. *Solution:* *Answer:* _____.	L 0 1 2 3 4
7.	The diagonal AC of the rhombus $ABCD$ is congruent to the side of the rhombus and has the length of 4 cm. Determine the length of the diagonal BD of the rhombus. *Solution:* *Answer:* _____.	L 0 1 2 3 4 5

8.	Mihai bought 36 kg of apples in two crates. If we take 3 kg of apples from the first crate and put them in the second crate, then the quantities of the apples in both crates become the same. Determine how many kilograms of apples were at the beginning in every crate. *Solution:*	L 0 1 2 3 4 5
	*Answer:*_____.	
9.	Consider the function $f \colon \mathbb{R} \to \mathbb{R}, \ f(x) = -3x + 4$. Determine the real values of x, for which the values of the function f are negative. *Solution:*	L 0 1 2 3 4 5
	Answer: $x \in$ _____.	
10.	Maria ate an ice-cream shaped as a right circular cone with the radius of the base of 3 cm and the altitude of 12 cm. Petru ate an ice-cream shaped as a rectangular parallelepiped with dimensions of 2 cm, 6 cm, 9 cm. Determine who of them ate more ice-cream. *Solution:*	L 0 1 2 3 4
	*Answer:*_____.	

11.	Find all real values of X, for which the sum of the algebraic fractions $\dfrac{2}{1-X^2}$ and $\dfrac{X}{X-1}$ is equal to 2.	L 0 1 2 3 4 5 6
	Solution:	
	*Answer:*_____.	
12.	Consider the function $f: \mathbb{R} \to \mathbb{R}$, $f(x) = m\,x + m^2 - 6$, $m \neq 0$. Determine all real values of m, such that $x = 1$ is the zero of the function f and the function f is monotone increasing.	L 0 1 2 3 4
	Solution:	
	*Answer:*_____.	