

**MINISTERUL EDUCAȚIEI,
CULTURII ȘI CERCETĂRII
AL REPUBLICII MOLDOVA**



Agenția Națională pentru
Curriculum și Evaluare

Numele: _____
Prenumele: _____
Patronimicul: _____
Instituția de învățământ: _____

Localitatea: _____
Raionul / Municipiul: _____

MATEMATICA (ÎN LIMBA ENGLEZĂ)

**EXAMEN NAȚIONAL DE ABSOLVIRE A GIMNAZIULUI
SESIUNEA DE BAZĂ**

07 iunie 2018

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

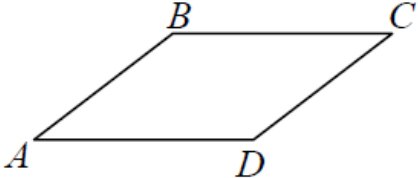
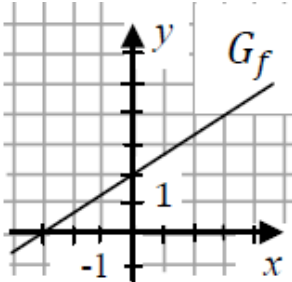
$$(a - b)(a + b) = a^2 - b^2$$

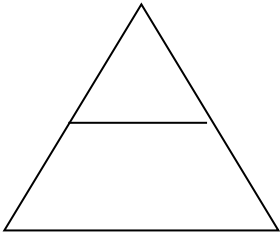
$$(a - b)^2 = a^2 - 2ab + b^2$$

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

$$\mathcal{A}_{sphere} = 4\pi R^2$$

$$\mathcal{A}_{square} = a^2$$

Nr.	Items	Score
1.	<p>Fill in the box so that the statement becomes true.</p> <p>“If $a = -5 + 3$ and $b = \frac{21}{5} : \frac{7}{10}$, then the value of the product $a \cdot b$ is the number <input type="text"/> .”</p>	L 0 3
2.	<p>On the picture, the parallelogram $ABCD$ is represented. Write in the box the measure in degrees of the angle B, if $m(\angle A) = 45^\circ$.</p> <p>$m(\angle B) = \input{width=4em type="text"/>.$</p> 	L 0 3
3.	<p>On the picture, the graph of the function $f: \mathbb{R} \rightarrow \mathbb{R}$, $f(x) = ax + b$, $a \neq 0$, is represented.</p> <p>Using the picture, fill in the box with one of the symbols “<”, “>” or “=”, so that the statement becomes true.</p> <p>$f(1) \input{width=4em type="text"} f(3)$.</p> 	L 0 3
4.	<p>From 3 liters of milk 600 grams of cheese are obtained. Determine how many kilograms of cheese will be obtained from 5 liters of milk.</p> <p><i>Solution:</i></p> <p><i>Answer:</i> _____.</p>	L 0 1 2 3 4

<p>5.</p>	<p>Calculate the value of the expression: $\sqrt{75} - \sqrt{12} - \frac{9}{\sqrt{3}}$.</p> <p><i>Solution:</i></p> <p>_____.</p> <p><i>Answer:</i>_____.</p>	<p>L 0 1 2 3 4</p>
<p>6.</p>	<p>Determine the absolute value of the difference of the real solutions of the equation</p> $x^2 - 7x + 12 = 0.$ <p><i>Solution:</i></p> <p>_____.</p> <p><i>Answer:</i>_____.</p>	<p>L 0 1 2 3 4</p>
<p>7.</p>	<p>The line segment joining the midpoints of two sides of an equilateral triangle is 3 cm. Determine the height of triangle.</p> <p><i>Solution:</i></p> <div style="text-align: right;">  </div> <p>_____.</p> <p><i>Answer:</i>_____.</p>	<p>L 0 1 2 3 4 5</p>

<p>11.</p>	<p>Prove that for every $X \in \mathbb{N}$ the value of the expression</p> $E(X) = \frac{X^3 + 2X^2 - 4X - 8}{X^2 + 4X + 4}$ <p>is an integer.</p> <p><i>Solution:</i></p>	<p>L 0 1 2 3 4 5 6</p>
<p>12.</p>	<p>Consider the function $f: \mathbb{R} \rightarrow \mathbb{R}$, $f(x) = x^2 - 2$. Determine all real values of m, for which the point $A(m, 1)$ belongs to the graph of the function f and is located in the first quadrant.</p> <p><i>Solution:</i></p> <p><i>Answer:</i> _____.</p>	<p>L 0 1 2 3 4</p>