TEST TIP EVALUARE NAȚIONALĂ

 CLASA A VIII-A

**SUBIECTU I.**

**Încercuiți litera corespunzătoare răspunsului corect. (30 de puncte)**

(5p) 1. Într-o oră de matematică patru elevi au rezolvat următoarea aplicație :

 9-5·(4-3·1), rezultatul corect este :

 a) -8

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 b) +6

 c) +4

 d) -3.

(5p) 2. Fie rapoartele $\frac{16}{20}$ și $\frac{x+1}{5}$.Valoarea lui x pentru care cele două rapoarte formează o proporție este :

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 b) -3
 c) 4
 d) -4

(5p) 3. Valoarea lui x, pentru care egalitatea x-2=-4 devine adevărată, este :

 a) +2

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 b) +4

 c) -4

 d) -2

(5p) 4. Din șirul numerelor : 4,9 ; 4,(98) ; 4,9(8) ; 5,0(9), mai apropiat de 5 este numărul :

 a) 4,9

 b) 4,(98)

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 c) 4,9(8)

 d) 5,0(9).

(5p) 5. Egalitatea : 4·$\sqrt{5}$-5·$\sqrt{3}$=5·$\sqrt{3}$-4·$\sqrt{5}$, este :

 a) adevărată

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 b) falsă

(5p) 6. Cezar vine la școală cu bicicleta.Timpul de parcurs este de 25 min.Pentru a ajunge la școală la ora 11,50 trebuie să plece de acasă la ora :

 a) 11,15

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 b) 11,35

 c) 11,25

 d) 11,45.

**SUBIECTUL II
Încercuiți litera corespunzătoare răspunsului corect, (30 de puncte)**

(5p) 1. Pe o dreapă d sunt situate punctele R,S,T,V.Numărul de segmente pe care-l formează aceste puncte este egal cu :

 a) 5

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 b) 6

 c) 7

 d) 8

(5p) 2. În figura alăturată dreptele a și b a

Sunt paralele. Valoarea unghiului x dintre b

ele, este de :

 a) 300

 b) 900

 c) 00

 d) 600

(5p) 3. Precizațin valoarea de adevăr a propoziției : ,,Dreptele a și b sunt paralele".

 1500

 a) Adevărat

 b) Fals 300

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(5p) .4. La o bancă se depune o sumă de bani, pentru un an. Banca oferă o dobândă anuală, fixă de 29%. Dacă suma depusă este egală cu 2000 de lei, după un an la bancă depozitul este de :

 a) 2610 lei

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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 b) 2720 lei

 c) 2580 lei

 d) 2680 lei.

(5p) 5. Lungimea laturii unui triunghi echilateral înscris într-un cerc de rază 6 cm este de :

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 a) 8$·\sqrt{3 }$ cm

 b) 4·$\sqrt{3}$ cm

 c) 5·$\sqrt{3 }$ cm

 d) 6·$\sqrt{3}$ cm.

(5p) 6. Într-o cutie, în formă de prismă patrulateră regulată cu latura bazei egală cu 48 cm și muchia de 30 cm, se introduc cuburi cu muchia de 12 cm. Numărul de cuburi care încap în cutie este :

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 a) 40

 b)35

 c) 30

 d) 25

**SUBIECTUL III**

**Scrieți rezolvările complete (30 de puncte)**

**(**5p) 1. Într-o pușculiță sunt 22 de monede de 10 bani și 50 de bani. Știind că în pușculiță sunt 5 lei :

 a) Stabiliți necunoscutele problemei și scrieți ecuațiile.

 b) Aflați câte monede sunt din fiecare fel.

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(5p) 2. Fie expresia E(x)=$\frac{1}{x-1}$ - $\frac{1}{x+1}$ - $\frac{2}{1-x^{2}}$ , ⩝x∈ℝ\{-1, 1}

 a) Arătați că E(x)=$\frac{4}{x^{2}-1}$

 b) Să se afle n∈ℤ astfel încât E(n)∈ℤ.

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(5p) 3. Fie funcția f : ℝ ℝ , f(x)=2·x-4.

a) Reprezentați grafic funcția

 b) Să se afle distanța de la reprezentarea grafică a funcției la punctul M(0;3).

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 (5p) 4. Fie triungiul ABC, cu ∢A=900.

 AM este mediană, M∈BC și BD este

 bisectoare cu D∈AC. A

 a) Să se arate că AM⊥BD. D

 b) Dacă DM=4·$\sqrt{3}$ cm, să

 se calculeze AABC. B C

 **M**

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(5p) 5. În figura alăturată, ABCD este pătrat și DCP este triunghi echilateral.

Latura AB=8 cm și AP⋂BC={Q}.

 A B

 a) Arătați că m(∢BAQ)=150

 b) Aflați lungimea segmentuluiQC. **P**

 Q

 B C

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 V

(5p) 6. În figura alăturată se consideră

o piramidă patrulateră regulate VABCD,

cu Al=260 cm2, At =360 cm2.

 a) Să se afle latura bazei.

 b) Fie T un punct aparținând

 muchiei VC, astfel încât D C

 perimetrul ΔTBD să fie

 minim. Să se afle lungimea

 segmentului VT.