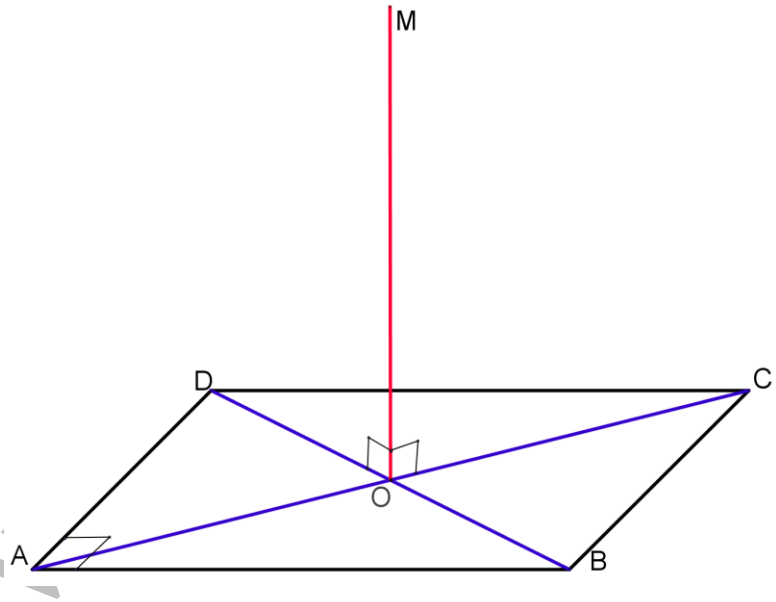
BAREM DE EVALUARE ŞI DE NOTARE

Varianta 157 *Prof. Telteu Constantin*

SUBIECTUL I		(30 de puncte)
1.	0	5p
2.	21	5p
3.	3	5p
4.	2000	5p
5.	100	5p
6.	6,76 (rezultatul calculului este 6,7(6), dar fiind vorba de media clasei…)	5p
SUBIECTUL II		(30 de puncte)
1.		5p
2.	$m_g=\sqrt{xy}$ …….. $m_g=\left(3-\sqrt{8}\right)\left(3+\sqrt{8}\right)$ …….. $m_g=1$ ……	2p 1p 2p
3.	Dacă deschid cartea la pag: 90-91; 92-93; 94-95; 96-97; 98-99, suma	2p

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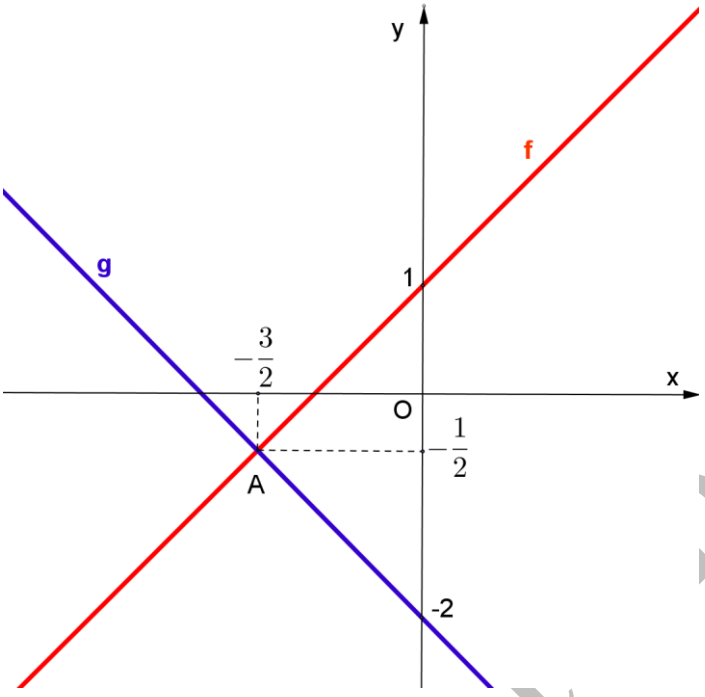
	numerelor cu care sunt numerotate paginile este 945…… La o deschidere a cărţii, suma numerelor cu care sunt notate paginile vizibile este număr impar, iar suma a cinci numere impare este număr impar. R: NU	3p
4.	 a) $f(x)=g(x)\Rightarrow x=;\ f\left(-\frac{3}{2}\right)=-\frac{1}{2}\Rightarrow A\left(-\frac{3}{2},-\frac{1}{2}\right)\in G_f\cap$	3p 2p
	b) $d(A,Oy)=x_A=-\frac{3}{2}$	5p
5	$2a=\frac{a+b}{2}\Rightarrow$ $b=3a\Rightarrow$ $a<b\Rightarrow$ $a=\frac{1}{4}\Rightarrow$ $b=\frac{3}{4}$	1p 1p 1p 1p 1p
	SUBIECTUL III	(30 de puncte)
1.	a) $V_{metal}=V_{prisma}-V_{piramida}=$	1p

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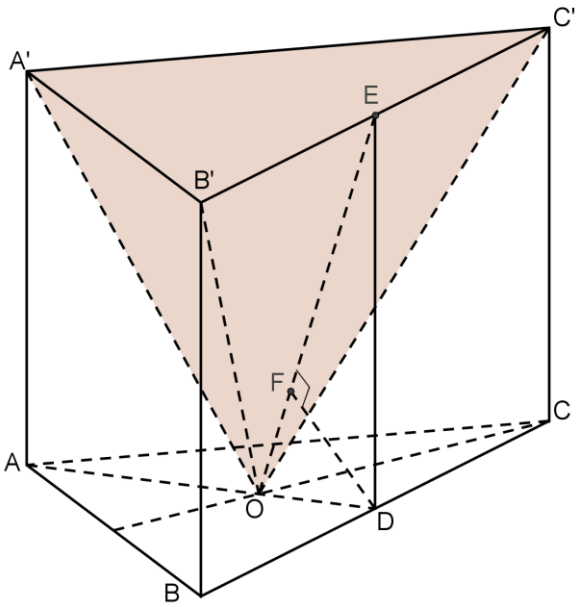
	$=\frac{36\sqrt{3}}{4}\cdot 6-\frac{36\sqrt{3}}{4}\cdot\frac{6}{3}=$ $=72\sqrt{3}\,cm^3$	2p 2p
	b) Suprafaţa ce trebuie vopsită are aria: $A=A_{l.pir}+A_{l.pr}+A_{b.pr}$ Fie D şi E mijloacele muchiilor $[BC]$ şi $[B'C']$. $OD=\sqrt{3}\,cm; EO=\sqrt{39}\,cm\Rightarrow A_{l.pir}=9\sqrt{39}\,cm^2$ ..... $A=9\sqrt{39}\,cm^2+18\cdot 6cm^2+\frac{36\sqrt{3}}{4}cm^2$ ..... $A=9\left(\sqrt{39}+12+\sqrt{3}\right)cm^2$	1p 2p 1p 1p
	 c) $BC\parallel$ $\parallel$ $l\left(C,(OB'C')\right)=d\left(D,(OB'C')\right)$ Fie $F=pr_{EO}D$. Avem: $\left.\begin{matrix}B'C'\perp OE\\ B'C'\perp DE\end{matrix}\right\}\Rightarrow\left.\begin{matrix}B'C'\perp(OED)\\ DF\subset(OED)\end{matrix}\right\}\Rightarrow\left.\begin{matrix}B'C'\perp DF\\ EO\perp DF\end{matrix}\right\}\Rightarrow DF\perp(OB'C')$ $DF=\frac{DO\cdot ED}{OE}=\frac{6\sqrt{13}}{13}cm$.	2p 2p 1p

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	SAU: Se poate arăta că distanţa este DF, cu reciproca a II-a a Teoremei celor trei perpendiculare.	
2.	a) $A_{bazin} = A_{dreptunghi} + A_{disc} =$ $= 20 \cdot 10 + \pi \cdot 5^2 =$ $= (200 + 25\pi) m^2$	1p 3p 1p
	b) $A_{bazin+bordura} = 20 \cdot 14 + \pi \cdot 7^2 =$ $= (280 + 49\pi) m^2 .$ $A_{bordura} = 280 + 49\pi - 200 - 25\pi \approx 155,36 m^2$	2p 1p 2p
	c) $P_{ext} = 2 \cdot 20 + 2\pi \cdot 7 = (40 + 14\pi) m$ $P_{\text{int}} = (40 + 10\pi) m$ Diferenţa $= 4\pi m \approx 12,56 m.$	2p 2p 1p

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