BAREM DE EVALUARE ŞI DE NOTARE

Varianta 174 *Prof Uruc Doina*

SUBIECTUL I		(30 de puncte)
1.	107	5p
2.	985	5p
3.	20	5p
4.	45^o	5p
5.	-2	5p
6.	7,60	5p
SUBIECTUL II		(30 de puncte)
1.	Desenează prisma Notează prisma	4p 1p
2.	Prima zi: $30\% \cdot x$ A doua zi: $\frac{5}{9} \cdot 70\% \cdot x$ $\frac{30}{100}x + \frac{5}{9} \cdot \frac{70}{100}x + 28 = x$ $-28x = -90 \cdot 28$ $x = 90km$	1p 1p 1p 1p 1p
3.	$a = 27c_1 + 5;\ a = 24c_2 + 5$ $a - 5 = 27c_1;\ a - 5 = 24c_2$ $a - 5 = [27, 24]$ $[27, 24] = 216$	1p 1p 1p 1p

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	$a=221$	1p
4.	a) Aduce la acelaşi numitor rapoartele din paranteze	1p
	Obține pentru paranteză rezultatul $\frac{7}{(x-1)(x+1)}$	2p
	Descompune $x^2-4x+3=(x-3)(x-1)$	1p
	$E(x)=\frac{x-3}{x+1}$	1p
	b) $\frac{x-3}{x+1}=1-\frac{4}{x+1}\in\mathbb{Z}$	1p
	$\frac{4}{x+1}\in\mathbb{Z}$	1p
	$x+1\in\{\pm1,\pm2,\pm4\}$	1p
	$x\in\{0,3\}$	2p
5	$-2x\le-2$	3p
	$x\ge1$	1p
	$x\in[1,+\infty)$	1p
	SUBIECTUL III	(30 de puncte)
1.	a) $a_b=\frac{l\sqrt{3}}{6}=\frac{\sqrt{3}}{2}m$	1p
	$a_p=\frac{l\sqrt{3}}{2}=\frac{3\sqrt{3}}{2}m$	1p
	$h^2=a_p^2-a_b^2\Rightarrow h=\sqrt{6}m$	1p
	$A_t=4\cdot\frac{l^2\sqrt{3}}{4}$	1p
	$A_t=9\sqrt{3}m^2$	1p

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	b) $\frac{PM}{MA}=\frac{PN}{NV}=\frac{1}{2}\Rightarrow MN \parallel VA$	1p
	$VA\subset(VAC)\Rightarrow MN\parallel(VAC)$	1p
	$\triangle$ $\sim\triangle$ $\frac{MN}{AV}=\frac{1}{3}$	2p
	$MN=1m$	1p
	c) $AM=VN=\frac{l\sqrt{3}}{3}=\sqrt{3}m$; $AN=VM=\sqrt{6}m$	1p
	$P_{\triangle}$ $3+\sqrt{3}+\sqrt{6}$	1p
	Fie $NR\perp VA, R\in(VA)$	1p
	$NR=\frac{2}{3}PP'=\sqrt{2}$, $(PP'\perp VA, P'\in(VA))$	1p
	$A_{\triangle}$ $\frac{3\sqrt{2}}{2}$	1p
2.	a) $BD=x, BC=x+48$	1p
	$AB^2=BD\cdot DC$	1p
	$x^2+48x-2025=0$	1p
	$(x+75)(x-27)=0$	1p
	$BD=27m$	1p
	b) $\triangle$ $\sim\triangle$	2p
	$\frac{DE}{CD}=\frac{EB}{AD}=\frac{BD}{AC}$	1p
	$\frac{A_{\triangle}}{A_{\triangle}}=\left(\frac{BD}{AC}\right)^2$	1p
	$\frac{A_{\triangle}}{A_{\triangle}}=\frac{81}{400}$	1p

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	c) $DE \perp AB \Rightarrow m(\sphericalangle$ 90^o $DF \perp AC \Rightarrow m(\sphericalangle$ 90^o $m(\sphericalangle$ $\Rightarrow AEDF$ - dreptunghi $AD = EF$ $EF = 36m$	1p 1p 1p 1p 1p

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