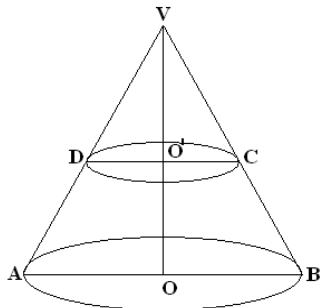
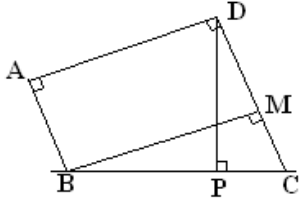


BAREM DE EVALUARE ȘI DE NOTARE

Varianta 175

Prof. Badea Daniela

SUBIECTUL I		(30 de puncte)
1.	108	5p
2.	-10	5p
3.	5	5p
4.	16	5p
5.	36π	5p
6.	12	5p
SUBIECTUL II		(30 de puncte)
1.	Desenează trunchiul de piramidă Notează trunchiul de piramidă	4p 1p
2.	$N = \frac{2\sqrt{5} + 3\sqrt{3}}{2} \in (2\sqrt{5}; 3\sqrt{3}) \Leftrightarrow 2\sqrt{5} < \frac{2\sqrt{5} + 3\sqrt{3}}{2} < 3\sqrt{3}$ $2\sqrt{5} < 3\sqrt{3} \mid + 2\sqrt{5} \Leftrightarrow 4\sqrt{5} < 3\sqrt{3} + 2\sqrt{5} \mid : 2 \Leftrightarrow 2\sqrt{5} < \frac{3\sqrt{3} + 2\sqrt{5}}{2}$ $2\sqrt{5} < 3\sqrt{3} \mid + 3\sqrt{3} \Leftrightarrow 2\sqrt{5} + 3\sqrt{3} < 6\sqrt{3} \mid : 2 \Leftrightarrow \frac{3\sqrt{3} + 2\sqrt{5}}{2} < 3\sqrt{3}$	1p 2p 2p
3.	a) x, y, z sumele celor trei frați $\Rightarrow x + y + z = 130$ $\frac{x}{4} = \frac{y}{3} = \frac{3z}{5} = k \Rightarrow x = 4k; y = 3k; z = \frac{5k}{3}$ $4k + 3k + \frac{5k}{3} = 130 \Leftrightarrow k = 15$ $x = 60; y = 45; z = 25.$	1p 2p 1p 1p
	b) $75\% \text{ din } 60 = 45$ $\frac{2}{3} \text{ din } 45 = 30; \frac{2}{5} \text{ din } 25 = 10.$	2p 3p
4.	b) $\frac{E(x)}{4} = \frac{x+1}{2x^2-x-5} \Leftrightarrow x^2+1 = 2x^2-x-5$ $x^2-x-6=0$ $x^2-x-6=0 \Delta = 25 \Rightarrow x_{1,2} = \frac{1 \pm 5}{2} \Rightarrow x_1 = 3; x_2 = -2$ $S = \{3\}$	1p 1p 2p 1p

SUBIECTUL III		(30 de puncte)
1.	<p>a) $\triangle VO'D \sim \triangle VAO \Rightarrow \frac{VD}{VA} = \frac{DO'}{AO} = \frac{1}{2}$ $VD = DA = 30\text{cm} \Rightarrow VA = 60\text{cm}$ $\triangle VAO, \sphericalangle \Rightarrow \cos A = \frac{AO}{VA} = \frac{1}{2}$ $m(\sphericalangle$</p> 	<p>2p 1p 1p 1p</p>
	<p>b) $V = \frac{\pi R^2 H}{3}$ $\triangle VAO, \sphericalangle \Rightarrow \sin A = \frac{VO}{VA} = \frac{\sqrt{3}}{2} \Rightarrow VO = 30\sqrt{3}\text{cm} = H$ $V = 9000\pi\sqrt{3}\text{cm}^3$</p>	<p>1p 2p 2p</p>
	<p>c) $\frac{R}{G} = \frac{\alpha}{360^\circ}$ $\alpha = \frac{30 \cdot 360^\circ}{60} = 180^\circ$</p>	<p>2p 3p</p>
2.	<p>a) $\frac{BC}{5} = \frac{AD}{4} = k \Rightarrow BC = 5k; AD = 4k$ $BM \perp DC \Rightarrow \triangle BMCdr \Rightarrow MC = 6\text{cm}; BM = AD = 4k$ Aplicând teorema Pitagora $\Rightarrow MC = 3k = 6 \Rightarrow k = 2$ $\Rightarrow BC = 10\text{cm}$</p> 	<p>2p 1p 1p 1p</p>
	<p>b) $A_{ABCD} = \frac{(AB + CD) \cdot AD}{2}$ $AD = 8\text{cm}$ $A_{ABCD} = 80\text{cm}^2$</p>	<p>1p 1p 3p</p>
	<p>c) $DP \perp BC \Rightarrow \triangle DPCdr$ $\sphericalangle \sphericalangle \sphericalangle \sphericalangle \sim$ $\frac{BM}{DP} = \frac{BC}{DC} \Leftrightarrow \frac{8}{DP} = \frac{10}{13}$ $DP = \frac{52}{5}$</p>	<p>1p 1p 2p 1p</p>