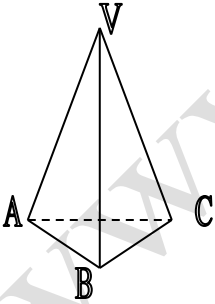
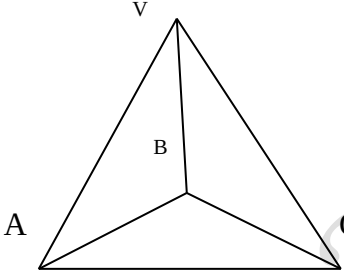


BAREM DE EVALUARE ȘI DE NOTARE

Varianta 107

Prof. Mirita Petruta

SUBIECTUL I		(30 de puncte)
1.	$[x] = 1$	5p
2.	$A \cap Z = \{-1, 0, 1, 2, 3\}$	5p
3.	$\frac{x-1}{x+1}$	5p
4.	3 cm	5p
5.	60^0	5p
6.	80 %	5p
SUBIECTUL II		(30 de puncte)
1.	$-6x^2 + y^2 - 6xy - 2x + 6y - 1$	5p
2.	Mama: 27 ani; fiul : 7 ani ; fiica : 2 ani	5p
3.	 <p>$h = 15\text{cm}$</p>	5p
4.	a) 60 %	5p
	b) $a=250$; $b=200$; $c=150$; $d=90$	5p

5	$\triangle AMP \sim \triangle ADC \Rightarrow \frac{AM}{AC} = \frac{MP}{CD} \Rightarrow MP = \frac{40}{3}$	5p
SUBIECTUL III		(30 de puncte)
1.	a) $E(x) = \frac{24x^2 + (3-8x)(3x-2)(3x+2)^2}{(3x+2)(3x-2)} = \frac{3x+2}{25x-6}$	5p
	b) $E(0) = -1 \Rightarrow 3x+2+1 \leq 0 \Rightarrow x \leq -1 \Rightarrow x \in (-\infty, -1]$	5p
	c) $x=31$	5p
2.	a) $A_b = \frac{l^2\sqrt{3}}{4}$. Deci $A_b = \frac{6^2\sqrt{3}}{4} \Leftrightarrow A_b = \frac{36\sqrt{3}}{4} \Leftrightarrow A_b = 9\sqrt{3} \text{ m}^2$ 	5p
	b) $VO = h = 12 \text{ m}$ $M - \text{mijlocul } [BC] \Rightarrow VM = a_p$ $AM = h_b = \frac{l\sqrt{3}}{2} \Rightarrow AM = \frac{6\sqrt{3}}{2} \Rightarrow AM = 3\sqrt{3} \text{ m}$ $OM = \frac{1}{3} \cdot AM \Leftrightarrow OM = \frac{1}{3} \cdot 3\sqrt{3} \Leftrightarrow OM = \sqrt{3} \text{ m}$ În $\triangle VOM$ ($m(\angle VOM) = 90^\circ$) $\xRightarrow{\text{T.P.}} VM^2 = VO^2 + OM^2$ $\Leftrightarrow VM^2 = 12^2 + \sqrt{3}^2$ $\Leftrightarrow VM^2 = 144 + 3$ $\Leftrightarrow VM = \sqrt{147}$ $\Leftrightarrow VM = 7\sqrt{3} \text{ m}$	5p

	<p>c) În $\triangle VOC$ ($m(\sphericalangle VOC) = 90^\circ$):</p> $\operatorname{tg}(\widehat{VC; \overline{ABC}}) = \operatorname{tg}(\widehat{VC; \overline{OC}}) = \operatorname{tg}(\sphericalangle VCO) = \frac{VO}{OC}$ <p>Fie N –mijlocul $[AB] \Rightarrow CN = \text{înălțimea bazei} \Rightarrow CN = AM = 3\sqrt{3} \text{ m}$</p> $OC = \frac{2}{3} \cdot AM \Leftrightarrow OC = \frac{2}{3} \cdot 3\sqrt{3} \Leftrightarrow OC = 2\sqrt{3} \text{ m}$ <p>Deci $\operatorname{tg}(\widehat{VC; \overline{ABC}}) = \frac{VO}{OC} = \frac{12}{2\sqrt{3}} = \frac{6\sqrt{3}}{3} = 2\sqrt{3}$</p>	5p
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