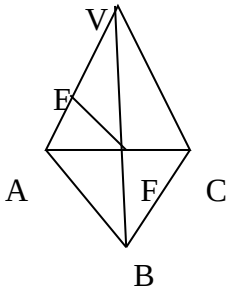
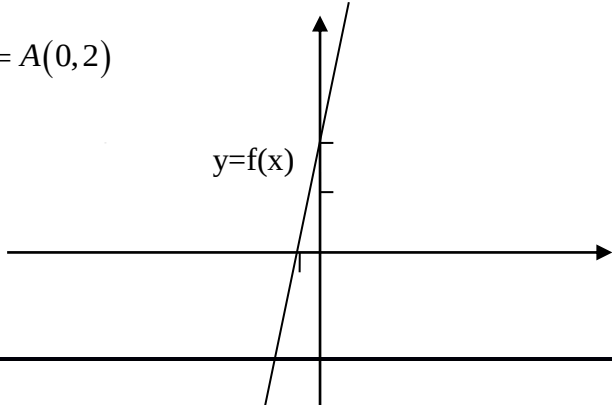
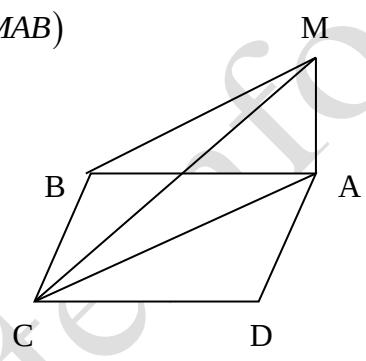


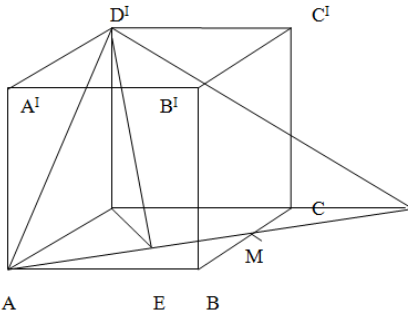
BAREM DE EVALUARE ȘI DE NOTARE

Varianta 106

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SUBIECTUL I		(30 de puncte)
1.	$x+y=6$ și $x-y = \frac{20}{3}$. Deci $x^2 - y^2 = 40$.	5p
2.	$\sqrt{2^2 + 6^2} = 2 + 6$ este falsă	5p
3.	$(1+\sqrt{2})^2 + (1-\sqrt{2})^2 = 1+2\sqrt{2}+2+1-2\sqrt{2}+2 = 6$	5p
4.	$AB=\sqrt{2}$, $AC=\sqrt{6}$, $Aria(\triangle) = \sqrt{3} \text{ cm}^2$	5p
5.	 <p> $m(\angle ACB) = 80^\circ$ $m(\angle EF, AC) = 40^\circ$.Deci $m(\angle EF, BC) = m(\angle ABC) = 60^\circ$. </p>	5p
6.	33,3 °C	5p
SUBIECTUL II		(30 de puncte)
1.	$E(x) = \frac{x^2 - x - 12}{x^2 - 16} = \frac{(x-4)(x+3)}{(x-4)(x+4)} = \frac{x+3}{x+4}$	5p
2.	<p>$f: \mathbb{R} \rightarrow \mathbb{R}, f(x)=3x+2$</p> <p>$G_f \cap Ox = A\left(\frac{-2}{3}, 0\right); G_f \cap Oy = A(0, 2)$</p> 	5p

3.	$\sqrt{x} + \frac{1}{\sqrt{x}} \geq 0$ Avem $x + \frac{1}{x} = 14$. Calculăm $\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right)^2 = x + 2 + \frac{1}{x} = 16$. Deci $\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right) = 4$	5p
4.	a) $MB = 10$ cm și $MC = 2\sqrt{34}$ cm	5p
	b) $CB \parallel AD, AD \perp MA \Rightarrow CB \perp MA$; $CB \perp AB, AB, MA \subset (MAB) \Rightarrow CB \perp (MAB)$	5p
		
5	$A(1;5) \in G_f \Leftrightarrow f(1) = 5 \Leftrightarrow m+1+m-3=5$. Deci $m = \frac{7}{2}$.	5p
SUBIECTUL III		(30 de puncte)
1.	a) x-numărul de zile $2(82 - 4x) = 100 - 6x$; $x = 32$ zile	5p
	b) $\frac{1}{a^2} + \frac{1}{b^2} = \frac{a^2 + b^2}{a^2 b^2} = \frac{3 + 2\sqrt{2} + 3 - 2\sqrt{2}}{(\sqrt{9-8})^2} = 6$	5p
	c) $\frac{a}{2} = \frac{b}{3} \Rightarrow b = \frac{3a}{2}$. Deci $\frac{a+b}{3a+2b} = \frac{a + \frac{3a}{2}}{3a + 2 \cdot \frac{3a}{2}} = \frac{5}{12}$	5p
2.	a) $A_1 = 24$ cm ²	5p

	 <p>b) $AD' = 2\sqrt{2}$, $AM = \sqrt{5}$, $AP = 2\sqrt{5}$, $PD' = \sqrt{4+16} = 2\sqrt{5}$</p> <p>$P_{APD'} = 4\sqrt{5} + 2\sqrt{2}$ cm</p>	5p
	<p>c) $DE \perp AM$ si $D'E \perp AM$. Unghiul celor doua plane este $\angle DED'$</p> <p>$\operatorname{tg} \alpha = \frac{DD'}{DE} = \frac{2}{DE}$; $DE = \frac{AD \cdot DP}{AP} = \frac{8}{2\sqrt{5}} = \frac{4\sqrt{5}}{5}$. Deci $\operatorname{tg} \alpha = \frac{\sqrt{5}}{2}$.</p>	5p
	<p>c) $OP \perp AB$, $OP = \sqrt{2}\text{cm}$, $CP = \frac{2\sqrt{3}}{2} = 2$ cm, iar $CO = \sqrt{5}$ cm</p>	5p