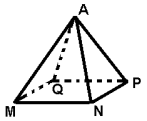
Lucrare scrisă la matematică semestrul I 2017-2018 14.12.2017
Clasa a VIII-a Barem de corectare şi notare

SUBIECTUL I

1	2	3	4	5	6
4	4	24	-16	0	7

6x5 p

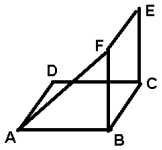
SUBIECTUL al II-lea



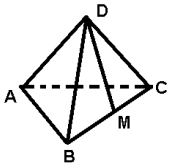
1. Desenare piramidei 3 p
Notarea piramidei 2 p

2. Media geometrică $m_g = \sqrt{a \cdot b}$ 1 p

$m_g = 1$ 4 p



3. AB||CD => $\sphericalangle(AF, CD) = \sphericalangle FAB$ 1 p
ΔABF dreptunghic isoscel 2 p
$\sphericalangle FAB = 45°$ 2 p



4. a) Trasarea apotemei DM 1 p

$DM = \frac{l\sqrt{3}}{2}$ 2 p

$DM = 5\sqrt{3}\ cm$ 2 p

b) Aria unei feţe= $25\sqrt{3}\ cm^2$ 3 p

Suma ariilor feţelor = $100\sqrt{3}\ cm^2$ 2 p

5. $n^3 + 3n^2 + 2n = n(n^2 + 3n + 2)$ 1 p

$n^2 + 3n + 2 = (n+1)(n+2)$ 3 p

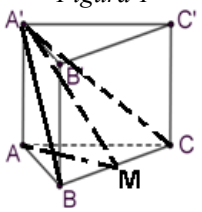
$n^3 + 3n^2 + 2n = n(n+1)(n+2)$ 1 p

SUBIECTUL al III-lea

1.a) $P = 2L + 2l$ 2 p

$P = 12\ m$ 3 p

Figura 1



b) $AM = 2\sqrt{3}\ m$ 2 p

$A'M = 4\ m$ 2 p

$A_{A'BC} = 8\ m^2$ 1 p

c) $BC \perp AM$ 2 p

$BC \perp A'M$ 2 p

$BC \perp (A'AM)$ 1 p

2. **a**) $15 = \sqrt{15^2} = \sqrt{225}$ 2 p

$6\sqrt{5} = \sqrt{6^2 \cdot 5} = \sqrt{180}$ 2 p

$15 > 6\sqrt{5}$ 1 p

b) $2\sqrt{5} = \sqrt{2^2 \cdot 5} = \sqrt{20}$ 2 p

$4 = \sqrt{4^2} = \sqrt{16}$ 1 p

$2\sqrt{5} - 4 > 0$ =>propoziţia este falsă 2 p

c) $A + B = \frac{15 - 6\sqrt{5}}{3} + 2\sqrt{5} - 4 =$ 1 p

$= \frac{15 - 6\sqrt{5} + 6\sqrt{5} - 12}{3} =$ 2 p

$= \frac{3}{3} =$ 1 p

$= 1 \in \mathbf{N}$ 1 p