

Barem de corectare si notare – Clasa a- VIII-a

1. a) $\sqrt{5 - 2\sqrt{6}} = \sqrt{3} - \sqrt{2}$ 1 p

$\sqrt{4 - 2\sqrt{3}} = \sqrt{3} - 1$ 1p

Raționalizare 1p

$x = -1 \in \mathbf{Z}$ 1p

$A = \{-1\}$ 1p

b) $\sqrt{x^2 + 9 - 6x} = |x - 3|$ 1p

$|x^2 - x - 6| = |x + 2| \cdot |x - 3|$ 1p

Finalizare $x=3$ 1p

2. a) $\overline{abc} = \overline{ab}^2 - 2\overline{ab} \cdot \sqrt{c} + c$ 1p

$10 \cdot \overline{ab} = \overline{ab} \cdot (\overline{ab} - 2\sqrt{c})$ 1p

$c \in \{0, 1, 4, 9\}$ 1p

$\overline{abc} \in \{100, 121, 144, 169\}$

b) $\sqrt{\frac{x}{y+x+z}} \geq \frac{2x}{x+y+z+t}$ 1p

analoagele și adunarea lor 1p

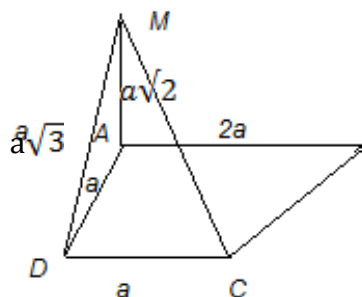
justificarea faptului că nu poate avea loc egalitatea (cu 2) 1p

3. a) $OM \parallel BD'$ (OM l.m. in $\Delta ABD'$) 1p

Figura 1p

b) Justificarea perpendicularității $OM \perp (A' C' D)$ 3p

4. a) figura 1p



$MD \perp DC$ 1p

$m[\sphericalangle(AB, MC)] = m(\sphericalangle DC, MC) = 60^\circ$ 1p

b) $m[\sphericalangle((MBC), (ACD))] = \sphericalangle ACM = 45^\circ$ 2p

c) $d(A, (MBC)) = a$ 1p

$d(D, (MBC)) = \frac{a}{2}$ 1p