

Kvadríky – zadání

Vypočtete základní parametry kvadríky κ , napište její název a část kvadríky omezené danými podmínkami načrtněte ve vhodně zvolené axonometrii s popsányými osami souřadnými (jde o skicu – náčrtek od ruky – viz vzorové řešení).

1. $\kappa = \{ [x,y,z] \in E_3: 2x^2 + 2y^2 + 4y - 16x + z + 26 = 0 \wedge z \geq 0 \wedge y \leq 0 \}$
2. $\kappa = \{ [x,y,z] \in E_3: x^2 + 9y^2 + 9z^2 - 36y - 18z + 36 = 0 \wedge x \geq 0 \}$
3. $\kappa = \{ [x,y,z] \in E_3: x^2 + 4y^2 - z^2 - 8x + 8y - 2z + 19 = 0 \wedge 0 \leq z \leq 3 \wedge y \leq 0 \}$
4. $\kappa = \{ [x,y,z] \in E_3: x^2 - 2y^2 + z^2 - 6x + 16y - 27 = 0 \wedge 0 \leq y \leq 4 \wedge z \geq 0 \}$
5. $\kappa = \{ [x,y,z] \in E_3: 4x^2 - y^2 - 8x + 4y + 4 = 0 \wedge -4 \leq y \leq 0 \wedge 0 \leq z \leq 4 \}$
6. $\kappa = \{ [x,y,z] \in E_3: x^2 + z^2 + 2y - 8x + 2z + 1 = 0 \wedge y \geq 0 \wedge z \geq 0 \}$
7. $\kappa = \{ [x,y,z] \in E_3: 4x + 4y^2 - 16y + z^2 - 6z = 11 \wedge x \geq 0 \}$
8. $\kappa = \{ [x,y,z] \in E_3: 9x^2 + 4y^2 + 9z^2 + 8y - 18z - 23 = 0 \wedge y \leq 0 \}$
9. $\kappa = \{ [x,y,z] \in E_3: 9x^2 + 9y^2 + 4z^2 - 18x + 36y + 9 = 0 \wedge z \geq 0 \}$
10. $\kappa = \{ [x,y,z] \in E_3: 3x^2 + 3y^2 - z^2 - 18x + 12y + 6z + 18 = 0 \wedge 0 \leq z \leq 6 \}$
11. $\kappa = \{ [x,y,z] \in E_3: 36x^2 - 9y^2 + 4z^2 - 18y - 24z - 9 = 0 \wedge -1 \leq y \leq 5 \}$
12. $\kappa = \{ [x,y,z] \in E_3: x^2 - y^2 + z^2 - 6x + 4y + 6 = 0 \wedge 0 \leq y \leq 4 \wedge z \geq 0 \}$
13. $\kappa = \{ [x,y,z] \in E_3: z^2 - 4x^2 - 4y^2 - 4z + 8x - 24y - 40 = 0 \wedge 0 < z \leq 6 \}$
14. $\kappa = \{ [x,y,z] \in E_3: x^2 - 4y^2 - 4z^2 - 8x + 16y + 16z - 20 = 0 \wedge 0 \leq x \leq 8 \}$
15. $\kappa = \{ [x,y,z] \in E_3: x^2 - y^2 - z^2 - 6x + 4y - 2z + 4 = 0 \wedge -3 \leq x \leq 0 \wedge z \geq 0 \}$
16. $\kappa = \{ [x,y,z] \in E_3: x^2 - y^2 + z^2 - 6x + 8y + 4z = 3 \wedge z \geq 0 \wedge -1 \leq y \leq 9 \}$
17. $\kappa = \{ [x,y,z] \in E_3: 4x^2 + z^2 - 24x + 2z + 33 = 0 \wedge 0 \leq y \leq 6 \wedge z \geq 0 \}$
18. $\kappa = \{ [x,y,z] \in E_3: 2y^2 + z + 4y - 6 = 0 \wedge 0 \leq x \leq 8 \wedge y \geq 0 \wedge z \geq 0 \}$
19. $\kappa = \{ [x,y,z] \in E_3: y^2 - 8y + 2x = 0 \wedge 0 \leq z \leq 6 \wedge x \geq 0 \}$
20. $\kappa = \{ [x,y,z] \in E_3: xz - 4 = 0 \wedge 0 < x \leq 4 \wedge 0 \leq y \leq 8 \wedge 0 < z \leq 4 \}$
21. $\kappa = \{ [x,y,z] \in E_3: x^2 + z^2 - 6x - 2z + 1 = 0 \wedge 0 \leq y \leq 8 \wedge z \geq 1 \}$