Geometry 2(e)– Topic list– 2024/2025/II

1. Spatial transformations with fixed points (4.2 till D 4.18); D:-; T:-; 6 with details
2. Spatial transformations with homogeneous coordinates (4.2 from D 4.18); D: 4.18 and 4.19; T: 4.20
3. Dandelion spheres (4.6 till 4.6.1); D:all; T: proof that $|\overline{PF}| = c \cdot |Pd|$
4. Tangent to conic sections (4.6.1: T 1.25 - T 1.30); D: 4.38 and 4.39; T: any
5. Ellipse (from notes); D: director circle and latus rectum T: any
6. Hyperbola (from notes); D: asymptote T: any
7. Quadratic curves and their types (pg 1-2); D: 1 and 4; T: 5
8. Conjugation and singular points (pg 2-3); D:6 and 9; T: 8 and 10 or 11;
9. Polarity to regular conic sections, tangents (pg 4); D: 9; T:13
10. Center of regular conics (pg 1,4-5); D: 16; T: 2
11. Diameter, conjugated direction and axis (pg 5); D:19 and 22; T: 23 or 24;
12. Canonical form of quadratic curves (pg 6); D:-; T:25;
13. Classification of quadratic surfaces (4.5); D:-; T:- $n = 3$ table!
14. Isometries of the Euclidean plane I (from 3.1: D 3.1 - T 3.12); D: 3.1 and 3.6; T: any 2
15. Isometries of the Euclidean plane II (from 3.1: L 3.13 - R 3.16); D: 3.1 and 3,6; T: 3.15 case 1 or case 2
16. Isometries of the Euclidean space I (from 3.2: D 3.19 - L 3.22); D: 3.19; T:3.20 or 3.22
17. Isometries of the Euclidean space II (from 3.2: T 3.17-18); D: 3.19; T:3.18
18. Polyhedrons (4.7 and from 4.7.1 till R 4.54) D: all; T: 4.53
19. Regular polyhedrons (from 4.7.1: D 4.59 - T 4.61); D: 4.59 and 4.60; T:4.61
20. Congruence of polyhedra (4.8); D: 4.62; T: (4.64 or 4.65) and 4.63