

Geometry 1(e)– Topic list– 2024/2025/I

1. Axioms I-II (1.1.1-1.1.2); D: 1.4; T: 1.3 or 1.5
2. Axioms III-V (1.1.3-1.1.5); D: 1.8; T: 1.12
3. Absolute theorems I (from 1.2: L 1.17 - L 1.24); D:-; T: 1.18 or 1.24 or any other 2
4. Absolute theorems II (from 1.2: T 1.25 - T 1.30); D:-; T: any
5. Absolute orthogonality I (from 1.3: D 1.31 - T 1.37); D: 1.31 and 1.32; T: 1.33 or 1.36
6. Absolute orthogonality II (from 1.3: D 1.38 - T 1.42); D: 1.38 and 1.38; T: 1.40 or 1.42
7. Line pencils and cycles (2.2); D: 2.8 and 2.9; T: 2.10
8. Models of the hyperbolic plane (2.3 till R 2.13); D:-; T:-; All 3 models!
9. Orthogonality in the Cayley-Klein model (2.3.1); D: 2.15; T:2.14 or 2.16
10. Stereographic projection, the connection of the Cayley-Klein and the Poincaré disk models (2.3.2); D: stereographic projection; T: 2.17
11. Inversion and the connection of the Poincaré models (2.3.3); D:2.19; T: 2.20;
12. Distance and angle of the hyperbolic space elements (2.3.4-2.3.6); D:2.24 and 2.26; T:2.25
13. Spherical geometry I (4.3 till the are of the spherical \triangle); D:-; T: area of the spherical \triangle
14. Spherical geometry II (from 4.3.2: T 4.28 - T 4.31); D:-; T: any
15. Vectors in the Euclidean space I (from 4.1: till 4.13+4.17); D: all; T:4.8 and 4.13
16. Vectors in the Euclidean space II (from 4.1: the rest); D: 4.5 and 4.9 and 4.13; T:4.14 or (4.15 and 4.16)
17. Area on the Euclidean plane (5.1); D: all; T: 5.3 and 5.4
18. Area on the hyperbolic plane (5.2) D: all; T: 5.14 or 5.15
19. Volume in the Euclidean space I (from 5.3 till T 5.17); D: 5.16; T:5.17
20. Volume in the Euclidean space II (from 5.3 the rest); D: 5.18+Cavalieri principle; T:5.19