Geometry knowledge survey	
Surname, Name	
Date	

Questions

- I. How would you characterize your level of geometric knowledge?
- II. What is your previous geometric education?
- III. What 3D software do you know and master?

Tasks

Work out the following problems based only on your current knowledge.

- 1. Parallel straight lines sketch, definition/property (geometric, analytic)
- 2. Perpendicular straight lines sketch, definition/property (geometric, analytic)
- 3. Intersecting straight lines sketch, definition/property (geometric, analytic)
- 4. Skew straight lines definition/property (geometric, analytic)
- 5. Centre of straight line segment definition/property (geometric, analytic), construction
- 6. Angle bisector sketch, geometric property, construction
- 7. Acute angle sketch, definition
- 8. Obtuse angle sketch, definition
- 9. Straight angle sketch, definition
- 10. Reflex angle sketch, definition
- 11. Isosceles triangle sketch, definition/geometric property, construction
- 12. Equilateral triangle sketch, definition/geometric property, construction

- 13. Scalene triangle sketch, definition/geometric property, construction
- 14. Right-angled triangle sketch, definition/geometric property, construction
- 15. Triangle median sketch, definition/geometric property, construction
- 16. Triangle centroid sketch, definition/geometric property, construction
- 17. Triangle altitude (height) sketch, definition/geometric property, construction
- 18. Triangle orthocentre sketch, definition/geometric property, construction
- 19. Quadrilateral sketch, definition/geometric property
- 20. Square sketch, definition/geometric property, construction
- 21. Rectangle sketch, definition/geometric property, construction
- 22. Parallelogram sketch, definition/geometric property, construction
- 23. Trapezium sketch, definition/geometric property, construction
- 24. Regular hexagon sketch, definition/geometric property, construction
- 25. Circle sketch, definition, equation
- 26. Tangent line to the circle at the point lying on the circle sketch, geometric property
- 27. Thales's theorem (circle) sketch, definition/geometric property
- 28. Tangent line to the circle from the point lying outside the circle sketch, construction
- 29. Circle inscribed into a triangle sketch, geometric property, construction
- 30. Circle circumscribed around (circumcircle) a triangle sketch, geometric property, construction
- 31. Axial symmetry sketch, definition/geometric property, construction
- 32. Central symmetry sketch, definition/geometric property, construction
- 33. Ellipse sketch, definition, equation, geometric properties
- 34. Parabola sketch, definition, equation, geometric properties
- 35. Hyperbola sketch, definition, equation, geometric properties
- 36. Cube 3D sketch, top and front views sketch
- 37. Sphere equation, 3D sketch, top and front views sketch
- 38. Cylinder equation, 3D sketch, top and front views sketch
- 39. Cone 3D sketch, top and front views sketch
- 40. Pyramid 3D sketch, top and front views sketch
- 41. Truncated cone 3D sketch, top and front views sketch
- 42. Truncated pyramid 3D sketch, top and front views sketch
- 43. Torus 3D sketch, top and front views sketch