**Presentations09**

**Non-Euclidean Geometry**

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|  | **Topic/Exercise** | **Presenter** |  |
| 1 | Look up and derive the Binet formula for the Fibonacci numbers. |  |  |
| 2 | Look up and solve the Königsberg bridges problem. |  |  |
| 3 | Show that the subset of the complex numbers $$\left\{ z=x+iy \right|z^{2}=1\}$$is a group with respect to the multiplication operator. |  |  |
| 4 | Consider the function defined by:$$f\left(x\right)=e^{-\frac{1}{x^{2}}}$$if $x\ne 0$ with $f\left(0\right)=0$.Calculate $f'(0)$. [Hint: use L’Hôpital's rule.] |  |  |
| 5 | Prove the AAS Theorem in the Neutral Geometry. |  |  |
| 6 | Do one of the exercises (#1 - #10) on quadrilaterals in the neutral geometry. [Note that the figures are supposed to be hints.] |  |  |
| 7 | Look up a problem on non-Euclidean geometry in your textbook to do. |  |  |
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