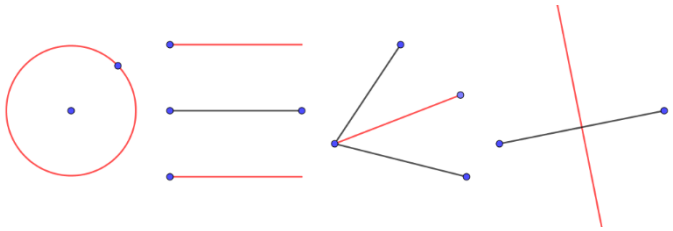
Locus

A locus is the set of all points which satisfies a certain condition.

Part 1 and 2 in this task is about loci.
Part 3 is about a mathematician.



Part 1

Imagine Petter's House, the town hall and the railway station as three points. Petter's house is three times as far from the town hall as from the train station. These two points are 300 m apart.

Choose an appropriate scale and mark the points representing the town hall and the train station. Experiment in different ways to find out where Petter's house can be. Then you decide the locus of Petter's house.

Make sketches and explain your methods. Describe the result and explain why it is correct.

Part 2

Create new problems where you have to find loci.

Make sketches and explain your methods. Describe the result and explain why it is correct.

For example, you can make drawings, construct with compass and ruler, use GeoGebra, make models …

Part 3

At all times mathematicians has investigated problems in the same way
you have done in part 1 and 2. Some of them has worked on pure geometric investigations.
Others have linked geometry to other parts of mathematics.

Choose an mathematician who has worked on problems linked to geometry.

Here are some examples: Euklid, Arkimedes, Descartes, Hypatia, Euler, Pythagoras

Give a brief description of the person and the significance of the work the mathematician has done both in the present and the future.

A SUBJECT REPORT

The whole class should work on parts 1, 2 and 3 and make a joint subject report, which offers a thorough explanation of how the class has worked with the questions and what results you have reached.

B EXHIBITION

Show the results of your work at parts 2 and 3. Make a colourful exhibition of your work.

C PRESENTATION

Make an oral presentation where the audience will get an insight into the content
you have been working on in the subject report and the exhibition.

NB. Pay careful attention to the assessment criteria for the task before you start the investigation.