



Information for Teachers

This resource pack is designed for Third Level Mathematics. This pack contains a series of worksheets that can be used as revision material. Learners will be led through a series of Maths exercises by Alan Turing as if they are a new codebreaker at Bletchley Park during the Second World War.

This resource will cover algebra, sequences and pattern, angles, ratio, and coordinates. Ideally learners should already have covered the basics of these concepts previously.

Before introducing this resource to your learners, you can provide them with information about the life of Alan Turing, and inform them that he was a British mathematician and codebreaker who played a pivotal role in the Second World War but was later prosecuted for homosexuality at a time when LGBT people experienced significant legal discrimination. He was pardoned in 2013 and now appears on the £50 bank note in the United Kingdom. This information is included for context in some of the worksheets.

As with all of our resources, this resource is designed to be flexible to the needs of your context and learners. Some learners/classes will be able to complete the worksheets on their own, while some may be differentiated for by completing the worksheets in small groups. There is also a blank version of the worksheets included if your learners will require substantial differentiation - learners could even use these to create their own versions of the worksheets for each other. Please adapt this work as necessary in order to best complement your own classroom context.

Each worksheet flows into the other, allowing the sheets to be partially self-marking, as wrong answers should be evident to learners as they work through the worksheets. This means learners will need to complete the worksheets fully and in the required order to achieve the correct answers. Additionally, there are a few instructions you may wish to specifically point out to your learners to ensure they can complete this resource without difficulty:

- In **Worksheet 2** learners need to match their answer to each sequence with the matching answer from Worksheet 1. The number they need to take forward is the number for the question in Worksheet 1 that matches the answer to the sequence. This is explained with an example on the worksheet itself, but may be worth pointing out again.
- In **Worksheet 4** learners need to complete the ratios as directed, and then write their answers in the form of coordinates to use in **Worksheet 5**. Again, there is an example given on the worksheet, but it is worth checking they understand this fully.

Please refer to the answer sheet for the answers to all of the questions included on each worksheet, and also for any other questions learners may have.

Resources included in this pack:

- Overview for Teachers
- 5 complete learner worksheets
- 1 complete answer sheet for teachers
- 5 blank learner worksheets
- 1 blank answer sheet

For further resources and information on LGBT Inclusive Education:

lgbteducation.scot - the national platform for LGBT Inclusive Education in Scotland.

tie.scot - for additional resources, answers to queries, advice, and professional learning.

We recommend completing the Scottish Government's professional learning course 'Delivering LGBT Inclusive Education' to support you with using this resource in the classroom. Stage 1 of this course is an E-Learning module and can be immediately accessed by registering on

lgbteducation.scot or by visiting tie.scot/cpd