Cormathzadrine

Teacher guidance

**Overview of task**

This task is based on a City & Guilds sample Paper 1 question, and involves modelling the level of a prescribed drug (with a half-life of between 1 and 4 hours) within a patient. It was adapted by the SouthWest and West Early Adopters, to provide a specimen problem-solving activity. Task-specific assessment grids were then designed by this group, intended for peer assessment.

**Mathematical strand:** Number; Algebra and Graphs

**Prior knowledge**

An appreciation of ‘half-life’. The exponential function could be introduced (not essential).

**Relevance to Core Maths qualifications**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **AQA** | **C&G** | **Eduqas** | **Pearson/ Edexcel** | **OCR** |
| ✓ | ✓ | ✓ | ✓ | ✓ |

**Suggested approaches**

This task could as easily lend it self to small group work as to individual work, according to students’ preferences.

**Resources/documentation**

In addition to this teacher guidance there are:

* Youtube (a ‘funny’ clip to use at start): House MD Clinic patient inhaler fail: <http://youtu.be/Qg78NzjLcrQ>
* Handout (Cormathzadine) with relevant data for students
* Specific assessment grid – can be used for peer assessment
* Examples of student work to trial peer assessment

**Relevant digital technologies**

Spreadsheet for modelling/graphing software/calculator

**Possible extensions**

The exponential function of decay could be introduced, as illustrated in the City & Guilds sample pre-release material. See the Core Maths Masters Subject Support, Strand: Graphs; Units 4 and 5 for further extensions. For a similar project, see the Nuffield FSMQ resources: [http://www.nuffieldfoundation.org/fsmqs/level-3-algebra#Maximum%20and%20minimum%20problems](https://webmail.plymouth.ac.uk/owa/redir.aspx?C=XaRQxnOuW0uPoBgml7RYjmHZ5_c8O9II0alGUwtDel4YAJYFcyXEasaqcwlAHXcNmk4YkUKg9UQ.&URL=http%253a%252f%252fwww.nuffieldfoundation.org%252ffsmqs%252flevel-3-algebra%2523Maximum%252520and%252520minimum%252520problems)

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