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| **Minor Award Name** | **Application of Number** |
| **Minor Award Code** | **3N0928** |
| **Level** | **3** |

**Suggested resources to support delivery:**

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| **Theme/Topic** | **Type** | **Relevance** | **Author/Source** | **Web Link** |
| Natural numbers, integers and real numbers | YouTube video | A (relatively long) video which gives a very good explanation of the various types of numbers. Especially helpful when explaining real numbers. | MrCaryMath | <https://www.youtube.com/watch?v=9orS7coe2WI> |
| Equivalence between common simple fractions, decimals and percentages by conversion | Worksheets | A series of worksheets that help to clearly see the relationship and connections between decimals fractions and percentages. | [www.worksheetfun.com](http://www.worksheetfun.com) | <http://www.worksheetfun.com/2013/02/24/convert-between-percents-fractions-and-decimals-4-worksheets/> |
| Webpage | The second link deals with converting fractions to percentages and presents a very simple method which should help learners see the how the two connect. | [www.mathsisfun.com](http://www.mathsisfun.com) | <https://www.mathsisfun.com/converting-fractions-percents.html> |
| Use of a calculator to perform functions such as +,-,x,÷, memory keys and clear keys. | YouTube video | A short video presentation on how to use the memory keys on a basic calculator. These keys are the ones that learners rarely if ever use but are in fact very useful.  The other keys should not pose any problems for learners. | Nipun Hartash | <https://www.youtube.com/watch?v=3DX6IQghdXE> |
| Approximations by using strategies including significant figures and rounding off natural numbers. | YouTube video | A nice short video that offers a clear explanation of significant figures and connects it all to the basics of rounding. Significant figures can cause learners problems but this presentation simplifies them for the purposes of level 3. | cgpbooks.co.uk | <https://www.youtube.com/watch?v=MK5C1N9e3vw> |
| Applying the principal mathematical functions +, -, x, ÷to natural numbers and integers. | Downloadable document | A comprehensive downloadable document which gives good explanations and examples of integers and their relationship and interactions with natural numbers. Also deals very well with questions around the order of operations. | Project Maths Development Team | <http://www.projectmaths.ie/documents/t&L/integers.pdf?strand> |
| Applying the principal mathematical functions +, -, x, ÷, to common simple fractions. | Website | An excellent website that covers all topics at this level with explanations and exercises. This website should be explored as it has many useful sections for different levels. | Khanacademy | <https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic> |
| Applying the principal mathematical functions +, -, x, ÷ to decimal numbers to two places of decimal. | Website | A web page containing many useful exercises on many areas covered in this module but also contains good exercises and explanations of decimals, also helps learners to have a better understanding of place value. | Literacytools.ie | <http://www.literacytools.ie/viewPrintableCategory.cfm?catid=2&id=26> |
| Describe shape and space constructs using language appropriate to shape and space to include square, rectangle, circle, cylinder, angles, bisect, radius, parallel, perpendicular | Text Book | *Angles, Shapes and Mensuration*  A very useful book which covers all the important skills required for this level and module (and some more besides). It is well presented and suitable for more adult learners. Contains ample examples, explanations and exercises. Although an Australian publication the exercises are suitable and can be adapted. Is available through Easons or can be purchased as an ebook. | Ready-ed Publications (edited by Mirella Trimboli) | <http://www.readyed.net/product/striving-to-improve-series-angles-shapes-mensuration/> |
| Draw everyday objects to scale using a range of mathematical instruments. | Set of Mathematical instruments | Should not pose any problems, but for learners who have difficulty with the concept of scale and understanding it, there is a link to a Khan academy video which should help.  The BBC skillswise link below should also be of use as will the learner packs produced by FAS (see below) can also be used. | Various  [www.khanacademy.org](http://www.khanacademy.org) | <https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-geometry/cc-7th-scale-drawings/v/scale-drawings-example> |
| Calculating the area of a square, rectangle, square and circle. | Website | A simple but clear explanation of how to calculate the area of different 2D shapes.  It has some very good exercises at the end.  This website can be used when working on many different areas at this level. | www.mathsisfun.com | <https://www.mathsisfun.com/geometry/area.html> |
| Calculating the volume of a cylinder. | YouTube video | A short video which clearly explains how to calculate the volume of a cylinder and is good at explaining the concept of volume. | VividMaths.com  [Steve K](https://www.youtube.com/channel/UCYxuKF7OMfJ9FwprYpS3xug) | <https://www.youtube.com/watch?v=y3TjAHV7esk> |
| Understand simple scaled drawings by working out real distance, location and direction. | Website | Another website which contains many useful exercises for level 3 Application of Number. This particular part is interactive and provides learners with an interesting way to learn about scale and its relationship to real distances. Also contains many related exercises. | mrnussbaum.com | <http://mrnussbaum.com/map-scale/> |
| Demonstrate metric measurement skills by using the correct measuring instrument and vocabulary appropriate to the measurement, to accurately measure length/distance, capacity, weight, time. | Website | A very good website which has many exercises which can be used for many different topics in this module. The topic here of length, capacity etc is very nicely covered and presented and will be of benefit to most learners. | BBC Skillswise | <http://www.bbc.co.uk/skillswise/topic-group/measuring> |
| Calculating solutions to real life problems using appropriate mathematical techniques to a variety of everyday situations including budgets, costings, time, quantity etc. | Learner Pack | 2 Learner packs developed by FAS (now Solas) and NALA for Learners (and tutors) preparing for Application of Number Level 3. | FAS (now Solas)  www.youthreach.ie | <http://www.youthreach.ie/wp-content/uploads/Application-of-Number-L3-Learner-Pack-Unit-1.pdf> |
| <http://www.youthreach.ie/wp-content/uploads/Application-of-Number-L3-Learner-Pack-Unit-2.pdf> |

**Useful Organisations:**

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| **Name** | **Contact Information** |
| NALA | <https://www.nala.ie/> |
| Write on | <http://www.writeon.ie/nala/home/home.jsf?1503058884738> |
| Primary Resources | <http://www.primaryresources.co.uk/maths/maths.htm> |
| Further Education Support Services | [www.fess.ie](http://www.fess.ie) |
| Maths Aids | [www.mathsaids.com](http://www.mathsaids.com) |

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| **MOOCs (Massive Online Open Courses)** | |
| Free access to online courses  Search regularly for new courses and new start dates | <https://www.mooc-list.com/> |