

## **GENERAL EDUCATION AND TRAINING CERTIFICATE**

## **NQF LEVEL 1**

## **ABET LEVEL 4 SITE-BASED ASSESSMENT**

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| **LEARNING AREA** | **:** | **MATHEMATICS AND MATHEMATICAL SCIENCES** |
| **CODE** | **:** | **MMSC4** |
| **TOOL** | **:** | **INVESTIGATION** |
| **DURATION** | **:** | **3 HOURS** |
| **MARKS** | **:** | **50** |

**This assessment tool consists of 5 pages.**

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| **INSTRUCTIONS AND INFORMATION FOR THE TEACHER.** |  |  |

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| 1. | This task assessing Unit Standard ID 7452 |  |  |

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| 2. | One week is allowed to complete the task, but if required, this can be extended |  |  |

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| 3. | To mark Activity 1.1 – 1.3. 2 use the rubric. |  |  |

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| 4. | A class discussion may be conducted before or during completion of the task. |  |  |

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| **ACTIVITY 1** |  |  |

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| 1.1 | |  |  |  | | --- | --- | --- | | Provider name | MTN’s Contract Price Plans | MTN’s Prepaid Price Plans | | Subscription fees | months**🗸** | None**🗸** | | Free SMSs | 25**🗸** | None**🗸** | | Free minutes | None**🗸** | None**🗸** | | SIM and connection fee | Free**🗸** | Free**🗸** | | Extras | Internet Bundle pm x 24**🗸** | Free Starter Pack.  MTN Zone.**🗸** |   The total marks in this question are divided by 2. |  | (5) |

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| 1.2 | 1.2.1 | **Contrac**t: is for 18 or 24 months. You pay a basic fee each month, usually for inclusive calls/texts/internet usage.**🗸**Any other relevant answer  **Prepaid**: You Pay up front for the length of the contract, say, the year, again for an agreed amount of calls/texts. OR  The other option is obviously, 'pay as you go' You normally buy the phone, buy a SIM then pay a 'top-up' charge every time you need minutes/texts**🗸**  Any other relevant answer |  | (2) |

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|  | 1.2.2 | **Peak times -** are times when, statistically, it is usually busier (at certain times of the day, week, month, year, etc.).**🗸** Any other relevant answer  **Off-peak times** - are times when there is hardly anything going on, or less busy than usual. OR Examples: calling rates - they vary, depending on when amounts of people use the landlines, etc., and may be cheaper at off-peak times and more expensive at peak times**🗸** Any other relevant answer |  | (2) |

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|  | 1.2.3 | **SMS**only allows you to send text.**🗸** Any other relevant answer  **MMS** allows you to send pictures, sounds, videos, text, or any combination of the four.**🗸** Any other relevant answer |  | (2) |

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| 1.3.1 | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Time per minutes(Peak) | 1 | 2 | 5 | 8 | 10 | n | | MTN Contract Price Plans(MTN to MTN) | R2,50 | R5,00**🗸** | R12,50**🗸** | R20,00**🗸** | R25,00**🗸** | 2.50n | | VODACOM  Contract Price Plans(Vodacom to Vodacom) | R1,60 | R3,20**🗸** | R8,00**🗸** | R12,80**🗸** | R16,00**🗸** | 1.60n |   The total marks in this question are divided by 2. |  | (5) |

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| 1.3.2 | MTN  VODACOM  2 Marks for the MTN Contract Price  2 Mark for the VODACOM Contract Price |  | (4) |

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|  | 1.3.3 | Shown on the graph R30,00 |  | (2) |

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|  | 1.3.4 | (a) MTN  (b) VODACOM |  | (2)  (2) |

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|  | 1.3.5 | For MTN to MTN  **🗸**  **🗸** |  | (2) |

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|  | 1.3.6 | |  |  | | --- | --- | | OPTION 1 (MTN Contract Price Plan)  Calculation Per minute | OPTION 2(VODACOM Contract Price Plan)  Calculation Per minute  Option 2 offers 120 free min’s on weekends and free Voicemail  Option 2 is cheaper | |  | (2) |

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| **ACTIVITY 2** |  |  |

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| 2.1 | **🗸**  **🗸**  Therefore the triangle with sides, , and 13cm is a right – angled triangle**🗸** |  | (3) |

M

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| 2.2 |  | **🗸**  **🗸**  O  N  **🗸** | 1 mark for line MN  1 mark for line NO  1 mark for angle N | (3) |

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|  | 2.2.1 | Size of Angle M = 29,2🗸  Size of Angle N = 90  Size of Angle O = 60,8🗸 |  | (2) |

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|  | 2.2.2 | 19cm or 19,5cm or 20cm |  | (1) |

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|  | 2.2.3 | Use the theorem of Pythagoras to check if this is really a right-angled triangle:      This is not a right- angled triangle because the area of the square on the hypotenuse (RQ) is **not** equal to the sum of the areas of the squares on the other two sides. **🗸🗸** |  | (5) |

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| 2.3 | Width = 750cm = 75m**🗸**  **🗸**  **🗸**  **🗸**  = **🗸**  Therefore the diagonal of the soccer field is 125m**🗸** |  | (6)  **[20]** |

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| **TOTAL:** |  | **50** |