


MATHEMATICS - NUMERACY 2nd SAMs 2017 Unit 1 (Non-calculator) Foundation Tier			Mark	MARK SCHEME Comments (Page 1)																																	
1. <table border="1"> <thead> <tr> <th>Item</th> <th>Quantity</th> <th>X or ✓</th> </tr> </thead> <tbody> <tr> <td>Orange juice</td> <td>2 litres</td> <td>(✓)</td> </tr> <tr> <td>Mushrooms</td> <td>50 kilograms</td> <td>X</td> </tr> <tr> <td>A bag of sugar</td> <td>1 kilogram</td> <td>✓</td> </tr> <tr> <td>Tomato sauce</td> <td>350 litres</td> <td>X</td> </tr> <tr> <td>Potatoes</td> <td>5 grams</td> <td>(X)</td> </tr> <tr> <td>Chocolate bar</td> <td>100 grams</td> <td>✓</td> </tr> <tr> <td>Bottle of vinegar</td> <td>250 millilitres</td> <td>✓</td> </tr> <tr> <td>Butter</td> <td>500 grams</td> <td>✓</td> </tr> <tr> <td>Milk</td> <td>4 litres</td> <td>✓</td> </tr> <tr> <td>Washing-up liquid</td> <td>500 litres</td> <td>X</td> </tr> </tbody> </table>			Item	Quantity	X or ✓	Orange juice	2 litres	(✓)	Mushrooms	50 kilograms	X	A bag of sugar	1 kilogram	✓	Tomato sauce	350 litres	X	Potatoes	5 grams	(X)	Chocolate bar	100 grams	✓	Bottle of vinegar	250 millilitres	✓	Butter	500 grams	✓	Milk	4 litres	✓	Washing-up liquid	500 litres	X	B4 4	Award B4 for all 8 correct responses Award B3 for 7 correct responses Award B2 for 6 correct responses Award B1 for 5 correct responses
Item	Quantity	X or ✓																																			
Orange juice	2 litres	(✓)																																			
Mushrooms	50 kilograms	X																																			
A bag of sugar	1 kilogram	✓																																			
Tomato sauce	350 litres	X																																			
Potatoes	5 grams	(X)																																			
Chocolate bar	100 grams	✓																																			
Bottle of vinegar	250 millilitres	✓																																			
Butter	500 grams	✓																																			
Milk	4 litres	✓																																			
Washing-up liquid	500 litres	X																																			
2. $7345 + 6339 + 4991 + 1093$ $= 19768$ 19800			M1 A1 B1 3	Attempt to add 3 or 4 numbers CAO FT their total																																	
3. (a) Two numbers less than or equal to 4 AND two numbers greater than 4. (b) Four numbers less than 3			B1 B1 2	For both parts accept use of appropriate decimal, fractional and/or negative values. e.g. 1, 2, 5, 6 OR 3, 4, 5, 6 OR 4, 4, 7, 7 etc e.g. 0, 0, 0, 0 OR 2, 1, 0, -1 etc																																	
4. (a) Correct net circled or clearly indicated  (b) Triangular prism (c) A			B1 B1 B1 3	Accept answers either circled or clearly indicated.																																	
5. (a) <table border="1"> <thead> <tr> <th>Position</th> <th>Name</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>F. Loxley</td> <td>-7</td> </tr> <tr> <td>2nd</td> <td></td> <td></td> </tr> <tr> <td>3rd</td> <td>A. Jenkins</td> <td>-2</td> </tr> <tr> <td>4th</td> <td>G. Francis</td> <td>-1</td> </tr> <tr> <td>5th</td> <td></td> <td></td> </tr> <tr> <td>6th</td> <td></td> <td></td> </tr> <tr> <td>7th</td> <td>H. Smith</td> <td>8</td> </tr> </tbody> </table> (b) 8 circled or clearly indicated (c) 16			Position	Name	Score	1 st	F. Loxley	-7	2 nd			3 rd	A. Jenkins	-2	4 th	G. Francis	-1	5 th			6 th			7 th	H. Smith	8	B3 B1 B1 5	B2 for 3 correct B1 for 2 correct. Accept 15 (for jointly winning) OR Accept 17, 18, 19.									
Position	Name	Score																																			
1 st	F. Loxley	-7																																			
2 nd																																					
3 rd	A. Jenkins	-2																																			
4 th	G. Francis	-1																																			
5 th																																					
6 th																																					
7 th	H. Smith	8																																			
6. Identifying/sight of when Chloe can(/cannot) go Identifying/sight of when Gethin can go Identifying / sight of when Martyn can(/cannot) go Identifying common dates – (25 th Jan), 22 nd March, 26 th April & 28 th June Latest date = 28 th June			B1 B1 B1 B1 B1 5	<i>Look at calendar for indication throughout the question</i> e.g. Sept, Oct, Nov, Dec crossed out Look for focus on Sundays (25 th Jan), (22 nd Feb), 22 nd (& 29 th) March, 26 th April, (24 th & 31 st May), 28 th June, (26 th July, 23 rd & 30 th Aug, 27 th Sept, 25 th Oct, 22 nd & 29 th Nov & 27 th Dec) Sight of common dates triggers 1 st 4 marks Award full marks for an unsupported correct answer																																	

<p style="text-align: center;">MATHEMATICS - NUMERACY 2nd SAMs 2017 Unit 1 (Non-calculator) Foundation Tier</p>	<p style="text-align: center;">Mark</p>	<p style="text-align: center;">MARK SCHEME Comments (Page 2)</p>												
<p>7. (Cost for the Jones and Williams families =) $3 \times 16 + 1 \times 15$ = (£)63 (Cost for the Phillips family =) $(99 - 63) = 36$ (Number of nights =) $(36 \div 12 =) 3$ nights</p> <p>Organisation and communication Accuracy of writing</p>	<p>M1 A1 B1 B1 OC1 W1 6</p>	<p>FT 'their 63' if M1 awarded FT 'their 36'. Not dependent on M1</p>												
<p>8.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Reading at the end of the period</td> <td style="width: 30%; text-align: right;">65197</td> </tr> <tr> <td>Reading at the beginning of the period</td> <td style="text-align: right;">64947</td> </tr> <tr> <td>Number of units used</td> <td style="text-align: right;">250</td> </tr> <tr> <td>Cost of the units, in £</td> <td style="text-align: right;">75.00</td> </tr> <tr> <td>Standing charge for the 3 months</td> <td style="text-align: right;">25.34</td> </tr> <tr> <td>Total cost</td> <td style="text-align: right;">100.34</td> </tr> </table>	Reading at the end of the period	65197	Reading at the beginning of the period	64947	Number of units used	250	Cost of the units, in £	75.00	Standing charge for the 3 months	25.34	Total cost	100.34	<p>B1 B2 B1 4</p>	<p>FT their numbers of units in £. B1 for answer in pence. FT their cost of units + 25.34. If any entry is blank, look in the work area.</p>
Reading at the end of the period	65197													
Reading at the beginning of the period	64947													
Number of units used	250													
Cost of the units, in £	75.00													
Standing charge for the 3 months	25.34													
Total cost	100.34													
<p>9. (a) (Total wage for 10 people) 10×280 (Wage of each of the other 9 people =) $(2800 - 1000) \div 9$ (£)200</p> <p>Median AND modal wage (£)200</p> <p>(b) Inserts £200 and gives a reason relating to 'median' or 'mode' including a related statement such as 'the most common' or 'the middle value'</p>	<p>M1 m1 A1 B1 E1 5</p>	<p>(£2800) FT 'their 2800' FT 'their derived 200' Needs sight of intention of reference to the median and / or mode Only award if clearly linked to evidence of understanding of the average selected. Accept a reason justifying the selection of 'mode or median' or 'not the mean'.</p>												
<p>10.(a) 11:30</p> <p>(b) 17:37 train selected at Blaenau Ffestiniog, (Arrives 18:35 Llandudno Junction,) and Departs Llandudno Junction at 18:39</p> <p>Arrives in Rhyl at 18:55</p> <p>$17:37 \rightarrow 23$ (minutes) + 55 (minutes) $\rightarrow 18:55$ or 78 (minutes)</p> <p style="text-align: center;">1 hour 18 minutes</p>	<p>B1 M1 A1 M1 A1 5</p>	<p>Needs sight of 17:37 train and 18:39 train May be implied Or alternative method to find the time difference e.g. using the durations given in the timetables, $58 + 4 + 16 (= 78$ mins) etc</p>												
<p>11. Correct rooms allocated to (Sasha and Mia), (Mr & Mrs Jones), (Flavia), (Mr & Mrs Evans), (Morys & Ifan), (Heledd) and (Mr & Mrs Igorson).</p>	<p>B4 4</p>	<p><i>There are several acceptable combinations.</i> B4 for all 7. B3 for 6. B2 for 5. B1 for 4.</p>												

MATHEMATICS - NUMERACY 2nd SAMs 2017 Unit 1 (Non-calculator) Foundation Tier	Mark	MARK SCHEME Comments (Page 3)
<p>12.</p> <p>(a) $7 \times 99p$ worked as $7 \times £1 - 7 \times 1p$ $5 \times £3.95$ worked as $5 \times £4 - 5 \times 5p$ $3 \times £7.50 - 3 \times 1p$ or $3 \times £7 + 3 \times 50p - 3 \times 1p$ Total (£)49.15 or 4915p</p> <p>(b) Wrong change, should be 85p</p>	<p>B1 B1 B1 B1</p> <p>B1</p> <p>5</p>	<p>Accept equivalent simple methods involving compensation from rounding with multiplication or any valid multiplication method throughout, but not repeated addition</p> <p>Allow £49.15p. Answer in (a) or (b)</p> <p>FT provided less than £50 and of equivalent difficulty.</p>
<p>13.(a) Reason e.g. 'fair comparison', 'doing survey the same way'</p> <p>(b) (i) Name: Shaun Length in range 10.3 to 10.5(cm)</p> <p>(ii) Shaun with a reason, e.g. 'Shaun because (positive) correlation', 'Shaun because leaves are similar', 'Shaun as there is a connection between length and width'</p> <p>(iii) Reasonable straight line of best fit</p> <p>(iv) Width in the range 6.8 to 7.5 cm</p>	<p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>5</p>	<p>Points above and below following trend</p> <p>OR correct reading from their line of best fit</p>
<p>14. Use of $\times 48 \div 4$ or $\times 12$ OR realising 55g is 2oz $(12 \times 55) \div 110 \times 4$ OR 2×12 OR equivalent 24 (ounces)</p>	<p>B1</p> <p>M1 A1</p> <p>3</p>	<p>(2 oz for 4 pancakes, so 2×12)</p>
<p>15. Attempt at unit cost e.g. for 100ml or 1ml, OR $1(.)28 / 8(00)$ with $45 / 3(00)$ or similar, OR looking to equate volumes, OR looking to <u>almost</u> equate volumes no more than 100ml difference, e.g. by looking at $3 \times 300ml$ with 800ml, or $2 \times 800ml$ with $5 \times 300ml$</p> <p>Large bottle 16(p) per 100ml or 0.16(p) per 1ml Small bottle 15(p) per 100ml or 0.15(p) per 1ml</p> <p>Better value statement, conclusion small bottle</p>	<p>S1</p> <p>B1 B1</p> <p>E1</p> <p>4</p>	<p>e.g. Idea of doubling or halving to equate, each done more than once. Method that would lead to a correct equate or comparison, e.g. for 300ml, 1200ml, 2400ml, ...</p> <p>OR 2.4l costs (£)3.84 or 1.2l costs (£)1.92 OR 2.4l costs (£)3.60 or 1.2l costs (£)1.80</p> <p>E mark is dependent on conditions: EITHER Award provided B1 and B1 awarded, OR Award as FT from their logical conclusion provided at least B1 awarded, ignoring further incorrect processing within a final statement, OR Award provided S1 awarded for conclusion from comparison with correct calculations and correct difference in price for stated extra volume, e.g. '(900ml in) 3 small bottles (is £1.35) which is better value because you get 100ml more (than a large bottle) for 7p more'</p>
<p>16. 065° 197°</p>	<p>B1 B1</p> <p>2</p>	<p>Allow a tolerance of $\pm 2^\circ$.</p>