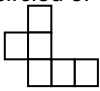


MATHEMATICS - NUMERACY 2nd SAMs 2017 Unit 1 (Non-calculator) Foundation Tier	Mark	MARK SCHEME Comments (Page 1)																																	
<p>1.</p> <table border="1" data-bbox="240 226 762 645"> <thead> <tr> <th>Item</th> <th>Quantity</th> <th>X or ✓</th> </tr> </thead> <tbody> <tr> <td>Orange 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	<p>B4</p> <p>4</p>	<p>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</p>
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<p>2. 7345 + 6339 + 4991 + 1093 = 19768 19800</p>	<p>M1 A1 B1</p> <p>3</p>	<p>Attempt to add 3 or 4 numbers CAO FT their total</p>																																	
<p>3.</p> <p>(a) Two numbers less than or equal to 4 AND two numbers greater than 4. (b) Four numbers less than 3</p>	<p>B1 B1</p> <p>2</p>	<p>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</p>																																	
<p>4. (a) Correct net circled or clearly indicated</p>  <p>(b) Triangular prism (c) A</p>	<p>B1</p> <p>B1 B1</p> <p>3</p>	<p>Accept answers either circled or clearly indicated.</p>																																	
<p>5. (a)</p> <table border="1" data-bbox="264 1279 772 1563"> <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> <p>(b) 8 circled or clearly indicated (c) 16</p>	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	<p>B3</p> <p>B1 B1</p> <p>5</p>	<p>B2 for 3 correct B1 for 2 correct.</p> <p>Accept 15 (for jointly winning) OR Accept 17, 18, 19.</p>									
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1 st	F. Loxley	-7																																	
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7 th	H. Smith	8																																	
<p>6.</p> <p>Identifying/sight of when Chloe can(/cannot) go Identifying/sight of when Gethin can go</p> <p>Identifying / sight of when Martyn can(/cannot) go</p> <p>Identifying common dates – (25th Jan), 22nd March, 26th April & 28th June Latest date = 28th June</p>	<p>B1 B1</p> <p>B1</p> <p>B1 B1</p> <p>5</p>	<p><i>Look at calendar for indication throughout the question</i> e.g. Sept, Oct, Nov, Dec crossed out Look for focus on Sundays</p> <p>(25th Jan), (22nd Feb), 22nd (& 29th) March, 26th April, (24th & 31st May), 28th June, (26th July, 23rd & 30th Aug, 27th Sept, 25th Oct, 22nd & 29th Nov & 27th Dec)</p> <p>Sight of common dates triggers 1st 4 marks</p> <p>Award full marks for an unsupported correct answer</p>																																	

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<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" data-bbox="240 510 810 846"> <tr> <td>Reading at the end of the period</td> <td>65197</td> </tr> <tr> <td>Reading at the beginning of the period</td> <td>64947</td> </tr> <tr> <td>Number of units used</td> <td>250</td> </tr> <tr> <td>Cost of the units, in £</td> <td>75.00</td> </tr> <tr> <td>Standing charge for the 3 months</td> <td>25.34</td> </tr> <tr> <td>Total cost</td> <td>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>
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<p>9. (a) (Total wage for 10 people) 10×280 (Wage of each of the other 9 people =) $(2800 - 1000) \div 9$ (£)200 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>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, $58 + 4 + 16 (= 78 \text{ mins})$ 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>												

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<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>