

MATHEMATICS 2 nd SAMs 2017 Unit 2 (Calculator allowed) Foundation Tier	Mark	MARK SCHEME Comments (Page 1)
1. (£)12.25 (£) 2.49 9 (cartons) (£) 34.03	B1 B1 B1 B1 4	
2. AC = 6.5 cm BC = 8 cm Completed triangle	M1 M1 A1 3	Allow ± 2 mm Dependent on at least one M1
3. Evidence of counting squares 46 – 52 (cm ²)	M1 A1 2	Inside the shape
4. (a) (i) likely (ii) unlikely (b) 4	B1 B1 B1 3	
5. (a) 42 14 28 6 8 20 1 5 3 17 (b) £1, 50p, 20p, 10p, 5p (c) (Weight of potatoes for 1 type of meal =) 2205 \div 9 (Weight of potatoes for 4 types of meal = 245) \times 4 980 (kg) Organisation and communication	B3 B1 M1 M1 A1 OC1 8	B3 for 5 correct answers B2 for 3 or 4 correct entries on FT B1 for 2 correct entries on FT OR 2205 \times 4 (= 8820) (8820) \div 9 CAO
6. (a) (x =) 18 (b) (x =) 60	B1 B1 2	Accept embedded answers
7. (\hat{TAB} =) 64° (AT =) 7 cm	B1 B1 2	$\pm 2^\circ$ ± 2 mm
8. (a) FALSE TRUE TRUE TRUE (b) Shape with rotational symmetry of order 3 Same shape showing 3 correct lines of symmetry	B2 B1 B1 4	B1 for 3 correct

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<p>9.</p> <p>(a) 5, 8, 11, 14 Add 3 to the previous number</p> <p>OR 5, 7.05, 9.93, 14, Multiply previous term by $\sqrt[3]{14/5} = 1.67...$</p> <p>(b) 40, 20, 10, 5 Divide previous term by 2</p> <p>OR 40, 28$\frac{1}{3}$, 16$\frac{2}{3}$, 5 Subtract $11\frac{2}{3}$ from the previous term</p>	<p>B2</p> <p>(B1) (B1)</p> <p>B1 B1</p> <p>(B1)</p> <p>(B1)</p> <p>4</p>	<p>For both (a) and (b), B2 for both spaces filled AND rule given. B1 for either filling the spaces or giving a rule (from those on the left).</p> <p>For both entries</p> <p>For both entries</p>
<p>10. (a) $7g - 2f$</p> <p>(b) 10</p> <p>(c) 0 and -1</p>	<p>B2</p> <p>B2</p> <p>B2</p> <p>6</p>	<p>Must be in an expression for B2. B1 for sight of $7g$ or $-2f$.</p> <p>B1 for $-6 + 16$.</p> <p>B1 for 0.</p>
<p>11. (a) (i) $\frac{1}{80}$</p> <p>(ii) $\frac{1}{2}$</p> <p>(b) 7 red 4 green 1 black</p>	<p>B1</p> <p>B1</p> <p>B1</p> <p>3</p>	
<p>12. 0.38×15.6 or equivalent = 5.928 (ISW)</p>	<p>M1 A1</p> <p>2</p>	<p>Unsupported 5.9 or 5.92 or 5.93 is M1A0.</p>
<p>13. Unambiguous sketch (i.e. rectangles identified) OR Unambiguous description of possible layout.</p> <p>Correct use of 'Area = length \times width' (Uncovered area =) $9 \times 9 - 8 \times 4 - 7 \times 2$ $35(\text{cm}^2)$</p>	<p>E1</p> <p>B1 M1 A1</p> <p>4</p>	<p>Allow E1 if intent clear.</p> <p>On any one of the three given shapes.</p>
<p>14. $(6 \times 0) + 5 \times 1 + 11 \times 3$ $\div 22$ 1.73</p> <p>Accuracy of writing</p>	<p>M1 m1 A2</p> <p>W1</p> <p>5</p>	<p>For attempt at $\sum fx$ or sight of 38.</p> <p>A1 for 1.72(.....)</p>

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15.	A (11, -1) B (21, 9) C (21, 1)	B2 B2 B2 6	B1 for each ordinate. B1 for each ordinate. B1 for each ordinate. FT 'their 21'. Accept answers on the diagram.
16.	Use of 'Speed = Distance ÷ Time' (Average speed =) $\frac{80}{2.5}$ = 32(mph)	M1 m1 A1 3	Allow M1 for 80 / 2(hr) 30(min) or 80 / 2.3 CAO
17.(a)	Correct rotation	B2	B1 for clockwise rotation.
(b)	Correct enlargement with scale factor 2	B2 4	B1 for correctly sized rectangle in incorrect position OR consistent use of wrong scale factor OR 2 correct vertices