MATHEMATICS 2nd 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 ÷ 9 (Weight of potatoes for 4 types of meal = 245) × 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 × 4 (= 8820) (8820) ÷ 9 CAO
6. (a) (x =) 18 (b) (x =) 60	B1 B1 2	Accept embedded answers
7. ($T\hat{A}B$ =) 64° (AT =) 7 cm	B1 B1 2	± 2° ± 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

	Mark	Comments
9. (a) 5, **8**, **11**, 14 Add 3 to the previous number OR 5, **7·05**, **9·93**, 14, Multiply previous term by $\sqrt[3]{14/5} = 1\cdot67\ldots$ (b) 40, **20**, **10**, 5 Divide previous term by 2 OR 40, **28$\frac{1}{3}$**, **16$\frac{2}{3}$**, 5 Subtract 11$\frac{2}{3}$ from the previous term	B2 (B1) (B1) B1 B1 (B1) (B1) 4	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). For both entries For both entries

10. (a) $7g - 2f$
 	
  (b)   10
 	
  (c)   0 and −1
	B2
	
	B2
	
	B2
	
	6
		Must be in an expression for B2.
		B1 for sight of $7g$ or $-2f$.
		
		B1 for −6 + 16.
		
		B1 for 0.

11. (a) (i) $\frac{1}{80}$
    (ii) $\frac{1}{2}$
 	
  (b)   7 red
           4 green
           1 black
	B1
	
	B1
	
	B1
	
	3	

12. 0·38 × 15·6 or equivalent = 5·928 (ISW)	M1 A1 2	Unsupported 5·9 or 5·92 or 5·93 is M1A0.

13. Unambiguous sketch (i.e. rectangles identified)
OR
    Unambiguous description of possible layout.
 	
    Correct use of 'Area = length × width'
(Uncovered area =) 9 × 9 − 8 × 4 − 7 × 2
          35(cm^2)
	E1
	
	B1
	M1
	A1
	
	4
		Allow E1 if intent clear.
		
		On any one of the three given shapes.

14.   (6 × 0) + 5 × 1 + 11 × 3
              ÷ 22
              1·73
 	
    Accuracy of writing
	M1
	m1
	A2
	
	W1
	
	5
		For attempt at ∑fx or sight of 38.
		
		A1 for 1·72(......)

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15.   A (11, −1)
        B (21, 9)
        C (21, 1)
 	
                                  6
	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 =) $\dfrac{80}{2{\cdot}5}$
 	
               = 32(mph)
	M1
	m1
	
	A1
	
	3
		Allow M1 for 80 / 2(hr) 30(min) or 80 / 2·3
		
		CAO

17.(a) Correct rotation (b) Correct enlargement with scale factor 2	B2 B2 4	B1 for clockwise rotation. B1 for correctly sized rectangle in incorrect position OR consistent use of wrong scale factor OR 2 correct vertices