

For OCR

**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
MATHEMATICS**

Foundation Paper 2A

Marking Guide

Method marks (M) are awarded for knowing and using a correct method.

Accuracy marks (A) are awarded for correct answers, having used a correct method.

(B) marks are independent of method marks.

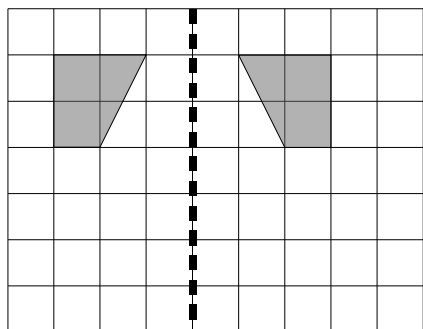


Written by Shaun Armstrong

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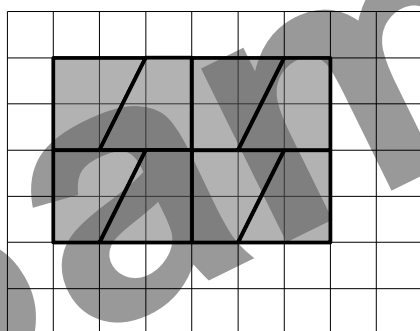
## Foundation Tier Paper 2A Marking Guide

1. (a)



M1 A1

(b) e.g.



B2

Total 4

2. e.g.

On average, how much do you spend on sweets per day?

nothing

1 to 50p

51p to £1

£1.01 to £2

more than £2

B2

Total 2

3. (a) 35%

B1

(b) 0.7

B1

(c) 0.06

B1

(d)  $= 0.2 \times 180 = £36$

B1

Total 4

4. (a) pentagon

B1

(b) (approx) 6.3 cm

B1

(c) (approx) 119°

B1

(d) obtuse

B1

Total 4

5.  $8 \times 2.80 = 22.40$   
 $22.40 - 17.50 = \text{£}4.90$

M1  
M1 A1

Total 3

6. (a)  $= 7.8 \div 2 = 3.9 \text{ cm}$

B1

(b)  $= \pi \times 3.9^2 = 47.78\dots$   
 $= 47.8 \text{ cm}^2$  (3sf) or  $48 \text{ cm}^2$  (2sf)

B1  
B1

Total 3

7. (a) (i) 46

B1

(ii) subtract 4 from the previous term

B1

(b) 9, 7

M1 A1

Total 4

8.

Item	Quantity	Cost (£)
Carton of Juice	5	3.45
Bread roll	8	1.60
Cheddar Cheese	500 g	3.25
<b>TOTAL</b>		8.30

B1

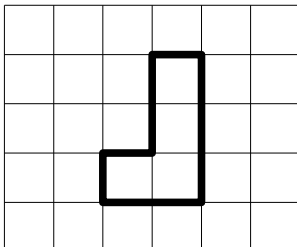
B1

B1

B1

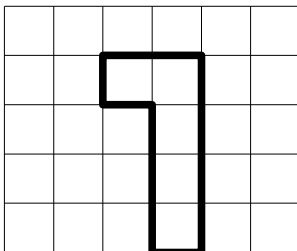
Total 4

9. (a)



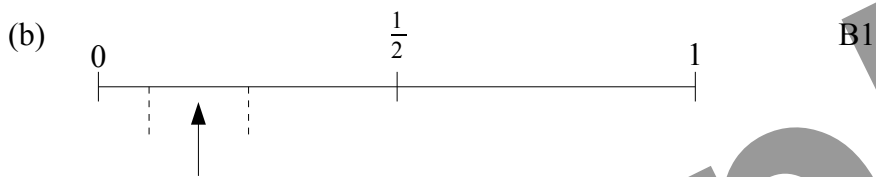
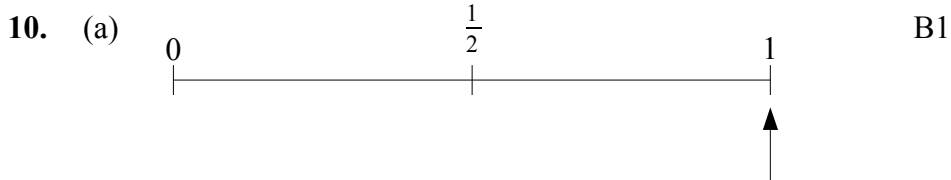
B2

(b)

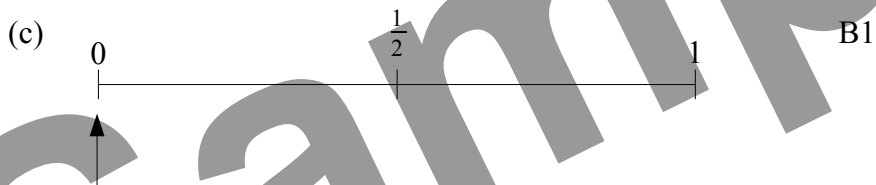


B2

Total 4

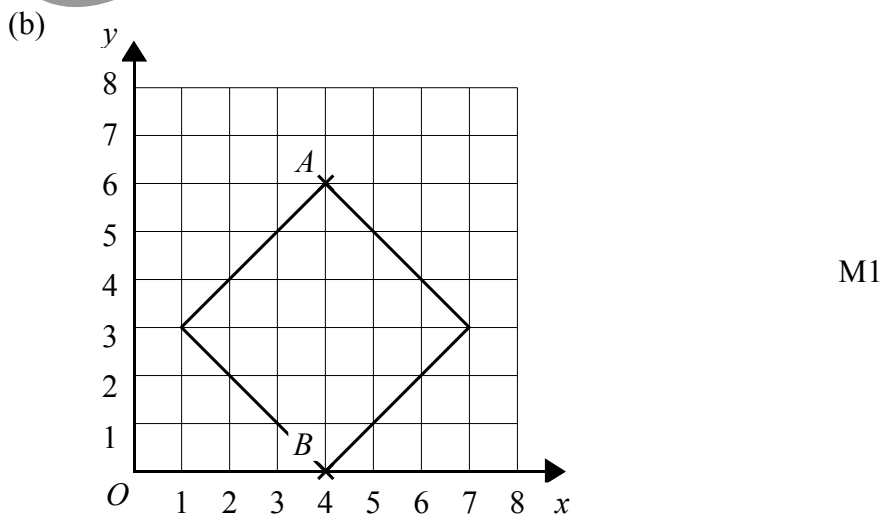


[ accept  $\frac{1}{12}$  to  $\frac{1}{4}$  ]



Total 3

11. (a) (i) (4, 6) B1  
 (ii) (4, 0) B1



(1, 3) and (7, 3) A1 Total 4

12. (a)  $120 \div 30 = 4$ ,  $80 \div 5 = 16$  M1  
 $\therefore$  4 houses A1

- (b) 1 house = 35, 3 houses = 105 M1  
 1 car = 30, 2 cars = 60  
 3 houses and 2 cars =  $105 + 60 = 165$   
 total straws =  $120 + 80 = 200$  M1  
 straws left =  $200 - 165 = 35$  A1

Total 5

13. (a) A B1  
 (b) D B1  
 (c) C B1  
 (d) B B1  
 (e) D B1

Total 5

14. time =  $25 \times 60 = 1500$  s  
 distance =  $6 \times 1500 = 9000$  m  
 $9000 \div 1000 = 9$  km

M1  
 M1  
 M1 A1

Total 4

15.

5	4 7 7
6	0 1 3 3 3 4 6 7 9
7	1 2 2 5 8 8
8	0 3

B2

Key: 7 | 2 represents 72 beats per minute

B1

Total 3

16. (a) =  $15 \times 10 + 25 = 150 + 25 = \text{£}175$

M1 A1

- (b)  $115 - 25 = 90$   
 $90 \div 15 = 6$  lessons

M1  
 A1

Total 4

17. (a) =  $9000 \div 3 = \text{£}3000$

B1

- (b) =  $1.105 \times 4000 = \text{£}4420$

M1 A1

Total 3

18. (a) (i)  $6xy$  B1  
(ii)  $4m - 2n$  M1 A1

(b)  $a - 3 = 5b$  M1  
 $b = \frac{a - 3}{5}$  A1

- (c) M2 A1

$x$	$x^3 - x$	too
4	60	small
5	120	big
4.5	86.6..	small
4.7	99.1..	small
4.8	105.7..	big
4.75	102.4..	big

$x = 4.7$  (1dp) A1 Total 9

19. (a)  $= x + (2x - 1) + (3x - 2) + (2x + 1)$  M1  
 $= 8x - 2$  A1

(b)  $8x - 2 = 34$  M1  
 $8x = 36$   
 $x = 36 \div 8 = 4.5$  M1

side lengths are 4.5, 8, 11.5, 10  
longest side = 11.5 cm A1 Total 5

20. (a) (i)  $= 8 - 2 = 6$  B1

(ii) 2 3 4 5 5 6 6 6 7 8  
median =  $(5 + 6) \div 2 = 5.5$  M1 A1

- (b)

No. Absent	No. Days	$F \times x$
2	1	2
3	5	15
4	11	44
5	9	45
6	4	24

mean =  $(2 + 15 + 44 + 45 + 24) \div (1 + 5 + 11 + 9 + 4)$  M1  
 $= 130 \div 30 = 4.3$  (1dp) A1

Total 6

21.	Bill charges $4 \times 70 = \text{£}280$	B1	
	area of walls $= 2 \times (4 \times 2.5) + 2 \times (6 \times 2.5) - (1 \times 2)$	M1	
	$= 2 \times 10 + 2 \times 15 - 2 = 20 + 30 - 2 = 48 \text{ m}^2$	A1	
	Ben charges $48 \times 6 = \text{£}288$	M1	
	Bill charges less by $\text{£}8$	A1	Total 5
<hr/>			
22.	(a) $= 300 \times 1.44$	M1	
	$= \text{€}432$	A1	
	(b) Travel Mart: $300 \times 1.48 = 444$	M1	
	after fee $= 0.98 \times 444 = 435.12$	M1 A1	Total 5
	extra $= 435.12 - 432 = \text{€}3.12$		
<hr/>			
23.	(a) $= \frac{1}{2}(4.6 + 7.2) \times 2.8$	M1	
	$= 16.52 \text{ cm}^2$	A1 B1	
	(b) (i) $= 3 + 5 + 3 + 5 = 16 \text{ cm}$	B1	
	(ii) $d^2 = 3^2 + 5^2$	M1	
	$d^2 = 9 + 25 = 34$		
	$d = \sqrt{34} = 5.8 \text{ cm (1dp)}$	M1 A1	Total 7

**TOTAL FOR PAPER: 100 MARKS**