Mathematics Mark Scheme

Paper B

2005

1. Amounts written in correct order as shown: 1

£0.75 | 99p | £2.05 | £9 | £10.50

Accept use of equivalent units, eg 75p.

Accept answers with missing or incorrect units.

[1]

2. Three numbers circled as shown: 1

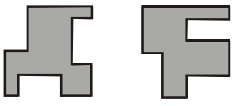
(64) (32) 16 8 (4) 2 1

***Do not** award the mark if additional incorrect numbers are circled.*

Accept unambiguous alternatives, eg numbers ticked, crossed or underlined.

[1]

3. The correct shape ticked as follows: 1



Accept alternative unambiguous indications of the correct shape, eg shape circled.

[1]

4. (a) Award **TWO** marks for the correct answer of £1.38 up to 2

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

$78 + (\frac{1}{2} \times 1.20)$

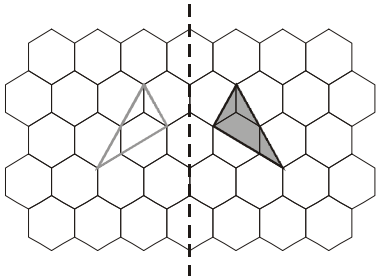
*Accept for **ONE** mark £138p **OR** £138 as evidence of an appropriate method.*

*Answer need not be obtained for the award of **ONE** mark.*

(b) 6 1

[3]

5. Diagram completed as shown: 1



Accept slight inaccuracies in drawing.

[1]

6. (a) 1

7	+	1	8	=	2	5

(b) 1
U1

2	5	×	3	=	7	5

[2]

7. Award **TWO** marks for table completed correctly as shown: up to 2

	number of **flat** surfaces	number of **curved** surfaces
sphere	0	1
cone	**1**	**1**
cuboid	**6**	**0**
cylinder	**2**	**1**

If the answer is incorrect, award **ONE** mark for two out of three rows completed correctly.

Accept a blank box for '0'.

[2]

8. (a) Answer in the range 340 to 360 inclusive. 1

(b) Answer in the range 240 to 260 inclusive. 1

[2]

9. (a) 955 in first box. 1

(b) 1010 in second box. 1

[2]

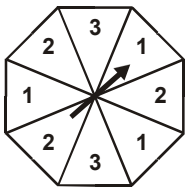
10. Accept for **TWO** marks any arrangement using one of the following sets of eight numbers: up to 2 U1

1, 1, 1, 2, 2, 2, 3, 3

OR

1, 1, 1, 1, 2, 2, 2, 2

eg



Numbers may be written in any order.

If the answer is incorrect, award **ONE** mark for an arrangement such that:

- the number of 1s and 2s is equal

OR

- the number of 3s is less than the number of 2s **AND** the number of 3s is less than the number of 1s.

***Do not** accept answers that leave sections blank or include numbers other than 1, 2 or 3.*

[2]

11. 29 1

[1]

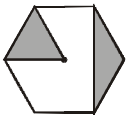
12. 12 1

[1]

13. Sapna 8 Robbie 6 1 U1

[1]

14. Shape completed correctly, as shown: 1



Shape need not be completed accurately, provided the two correct triangles are identified unambiguously.

[1]

15. (a) (0, 10) 1

Coordinates must be written in the correct order.

Accept unambiguous answers written on the diagram.

(b) (10, 20) 1

*If the answer for 15a is (10, 0) **AND** the answer to 15b is (20, 10), award **ONE** mark only, in the 15b box.*

[2]

16. Award **TWO** marks for all four factors, as shown: up to 2

1, 2, 5, 10

If the answer is incorrect, award **ONE** mark for:

- three factors correct and none incorrect

OR

- four factors correct and one incorrect.

Accept factors written in any order.

*All four factors and no incorrect numbers must be given for the award of **TWO** marks.*

[2]

17. 1
U1

3	2	×	3	2	=	1	0	2	4

Accept 32

[1]

18. (a) Answer in the range 14 to 16 inclusive. 1

(b) An explanation which recognises that the bar for tomato is shorter than the other two bars added together, eg 1
U1

- 'Because there are 300 children altogether and only 135 chose tomato';
- 'Because 165 is more than 135';
- 'Because double 135 is 270 and there are more children than that altogether';
- 'Because half of 300 is 150';
- 'Because tomato is less than mushroom add chicken'.

No mark is awarded for writing 'No' alone.

***Do not** accept vague or arbitrary explanations, eg*

- *'Because most of the children chose tomato';*
- *'Because 135 children chose tomato';*
- *'Because 75 + 135 + 90 = 300'.*

If 'Yes' is circled but a correct, unambiguous explanation is given then award the mark.

[2]

19. Award **TWO** marks for the correct answer of 8 up to 2

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

$1 + 2 + 3 = 6$

$24 \div 6 = 4$

4×2

OR

6 fruits	2 oranges
12 fruits	4 oranges
18 fruits	6 oranges
24 fruits	wrong answer

*Answer need not be obtained for the award of **ONE** mark.*

[2]

20. 7.4 and 9.4 1

U1

Accept numbers in either order.

Both numbers must be correct for the award of the mark.

[1]

21. $x =$ 35° 1

[1]

22. Award **TWO** marks for all seven boxes completed correctly as shown: up to 2
U1

	hockey	rounders	Total
boys	22	**28**	**50**
girls	**27**	**26**	53
Total	**49**	**54**	**103**

If the answer is incorrect, award **ONE** mark for five or six boxes completed correctly.

[2]

23. (a) 18 1

Do not *accept 18%*

(b) 200 1

Do not *accept 200%*

If the answer for 23a is 18% ***AND*** *the answer for 23b is 200%, award*
ONE *mark only in the 23b box.*

[2]

24. Award **TWO** marks for the correct answer of 26.8cm up to 2

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

$85 \div 2 - 15.7$

OR

$85 - (15.7 \times 2)$ = wrong answer

wrong answer ÷ 2

OR

$85 - (15.7 \times 2) = 53.6$

Award ***ONE*** *mark for an answer of 53.6* ***OR*** *for 53.6 shown with no evidence of an incorrect method.*

Answer need not be obtained for the award of ***ONE*** *mark.*

[2]

25. Award **TWO** marks for the correct answer of 0.15 up to 2

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

$45 - 12 = 33$

$33 \div 220$

Accept equivalent fractions, eg $\frac{3}{20}$

Accept for ***ONE*** *mark 0.015* ***OR*** *15*
OR *1.5* ***OR*** *150 as evidence of appropriate method.*
Answer need not be obtained for the award of ***ONE*** *mark.*

[2]