MASTER MATHS GCSE

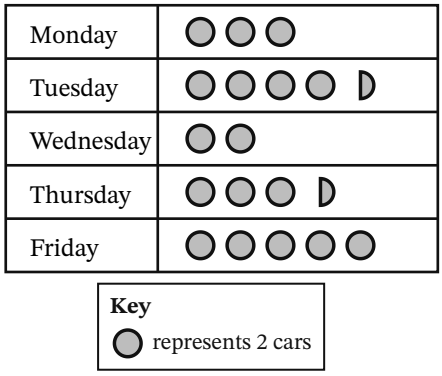
GCSE Mathematics 9-1

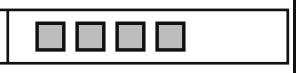
Pictograms

(Non-Calculator)

Mark Scheme

Total available marks: 46

Q	Answer	Working	Mark
1(a)	12	3 circles × 4 = 12	1
1(b)	7	1 circle = 4 and ¾ of a circle = 3 4 + 3 = 7	1
1(c)	Grapes	Grapes has the most symbols	1
1(d)	6	Grapes 16, banana 10 16 − 10 = 6	1
1(e)	50	12 + 10 + 7 + 16 + 5 = 50 (1 mark for at least three correct values)	2
2	No, Saturday had 110 and twice Friday is 120	Friday: 3 × 20 = 60 Saturday: 5½ × 20 = 110 60 × 2 = 120, not 110 (1 mark for 60 and 110)	2
3	Thursday	Thursday should be 10 ÷ 4 = 2½ circles, not 3	1
4	35	Total circles: 4 + 2½ + 3½ + 2 = 12 120 ÷ 12 = 10 pupils per circle 3½ × 10 = 35 (1 mark for 12 circles, 1 mark for 10)	3
5	5	20 ÷ 4 = 5	1
6	57	Art 18, Chess 15, Drama 24 18 + 15 + 24 = 57 (1 mark for two correct values)	2
7	7	35 ÷ 5 = 7	1
8		Tue 9 ÷ 2 = 4½, Wed 2, Thu 3½, Fri 5 circles (3 marks all four correct, 2 marks three correct, 1 mark two correct)	3
9	35	3 × 10 = 30 and half of 10 = 5 30 + 5 = 35	1

Q	Answer	Working	Mark
10	27	$2 \times 12 = 24$ and ¼ of $12 = 3$ $24 + 3 = 27$	1
11(a)	6	$3 \times 2 = 6$	1
11(b)	3	$1 \times 2 = 2$ and half a rectangle = 1 $2 + 1 = 3$	1
11(c)	Thursday 	$5 \div 2 = 2½$ rectangles	1
11(d)	Friday 	$8 \div 2 = 4$ rectangles	1
12		$12 \div 8 = 1½$ circles	1
13	*Any two of: no key, symbols are different sizes, no title* *e.g.* there is no key, and the circles are not all the same size	1 mark for each correct point	2
14	5, because all the numbers are multiples of 5	With 5, every number is a whole number of circles 2 does not divide 35 or 15, and 7 does not divide 20, 15 or 40	1
15	Tea 10, Coffee 16, Juice 7	Tea $2½ \times 4$, Coffee 4×4, Juice $1¾ \times 4$ (1 mark for two correct)	2
16	3 people	Half a circle $= 6 \div 2 = 3$	1
17(a)	36	$4 \times 8 = 32$ and half of $8 = 4$ $32 + 4 = 36$	1
17(b)	108	Chocolate 36, lemon 18, carrot 30, vanilla 24 $36 + 18 + 30 + 24 = 108$ (1 mark for at least three correct values)	2
17(c)	£60	Carrot: $3 \times 8 = 24$ and ¾ of $8 = 6$, so 30 cakes $30 \times £2 = £60$	2
18(a)	Dog 6, Cat 8, Fish 4, Rabbit 2	Check the total: $6 + 8 + 4 + 2 = 20$ (1 mark for two or three correct)	2

Q	Answer	Working	Mark
18(b)	Dog ▭▭▭ Cat ▭▭▭▭ Fish ▭▭ Rabbit ▭ **Key** ▭ represents 2 pets	Dog 3, Cat 4, Fish 2, Rabbit 1 rectangles (1 mark for two or three correct rows)	2
18(c)	Cat	Cat has the highest frequency	1
19	▭▯	$9 \div 6 = 1\frac{1}{2}$ squares	1
20	1 car	$4 \div 4 = 1$	1
21	15	$20 \div 4 = 5$, so ¼ is 5 $3 \times 5 = 15$	1
22	5	$15 \div 3 = 5$	1

Total available marks for this paper	**46**