MASTER MATHS GCSE

GCSE Mathematics 9-1

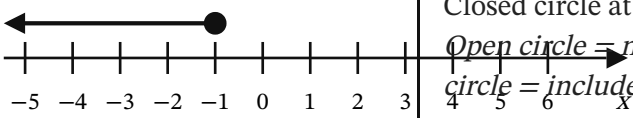
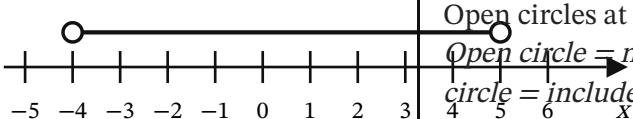
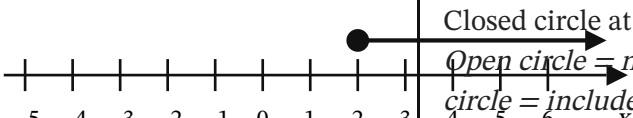
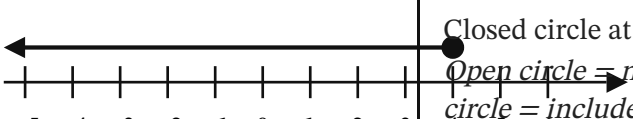
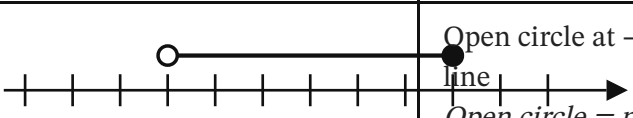
Using Inequality Symbols

(Non-Calculator)

Mark Scheme

Total available marks: 43

Q	Answer	Working	Mark
1(a)	Less than		1
1(b)	Greater than		1
1(c)	Less than or equal to		1
1(d)	Greater than or equal to		1
1(e)	Not equal to		1
1(f)	Equal to		1
2(a)	$7 < 10$	7 is smaller than 10	1
2(b)	$3 > -1$	Any positive number is bigger than a negative number	1
2(c)	$-4 < 0$	Negative numbers are smaller than 0	1
2(d)	$5 < 5.2$	$5 = 5.0$, which is smaller than 5.2	1
2(e)	$-6 > -10$	-6 is closer to 0 than -10, so it is bigger	1
3(a)	$x > 5$		1
3(b)	$x \leq 3$		1
3(c)	$x \geq -2$	'At least' means greater than or equal to	1
3(d)	$x \leq 8$	'No more than' means less than or equal to	1
4	$x > 2$	Subtract 3: $2x > 4$ Divide by 2: $x > 2$	2
5	$x \leq 4$	Add 4: $5x \leq 20$ Divide by 5: $x \leq 4$	2
6	$x < 5$	Add 5: $3x < 15$ Divide by 3: $x < 5$	2
7	$x \geq 4$	Subtract 2: $4x \geq 16$ Divide by 4: $x \geq 4$	2
8(a)	$-1, 0, 1, 2, 3, 4$	Whole numbers bigger than -2, up to and including 4	2

Q	Answer	Working	Mark
8(b)	1, 2, 3, 4, 5, 6	Whole numbers from 1 (included) up to but not including 7	2
8(c)	−5, −4, −3, −2, −1, 0, 1, 2	Whole numbers from −5 (included) up to but not including 3	2
8(d)	3, 4, 5, 6, 7, 8	Whole numbers bigger than 2, up to and including 8	2
9		Open circle at 3, arrow to the right *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2
10		Closed circle at −1, arrow to the left *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2
11		Open circles at −4 and 5, joined by a line *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2
12		Closed circle at 2, arrow to the right *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2
13		Closed circle at 4, arrow to the left *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2
14		Open circle at −2, closed circle at 4, joined by a line *Open circle = not included (< or >). Closed circle = included (≤ or ≥).*	2

Total available marks for this paper	**43**