GCSE Foundation Maths: Topic Test 2 Everyday Algebra - Mark Scheme

Mark	Description
M1	Method mark (awarded for showing correct process)
A1	Accuracy mark (awarded for correct answer dependent on M mark)
B1	Independent mark (awarded for correct answer/statement regardless of method)

Mark Scheme & Worked Solutions

Question	Answer	Mark	Guidance / Method
1(a)	27	B1	Correct next term.
1(b)	Add 4	B1	Mention term-to-term rule of $+\ 4$ or common difference of 4.
1(c)	No, with valid reason	B1	Valid working: e.g. 4n + 3 = 53 \implies 4n = 50 (not whole); or sequence continues $27, 31, 35, 39, 43, 47, 51, 55$ (misses 53).
2(a)	$x = 12$	B1	$19 - 7 = 12$
2(b)	$y = 15$	B1	$11 + 4 = 15$
2(c)	$p = 7$	B1	$35 \div 5 = 7$
3	$w = 24$	M1 A1	M1 for showing $\times\ 4$ on both sides (6×4). A1 for 24.
4(a)	Fourth quadrant	B1	Accept "4th" or "IV".
4(b)	$(1, 1)$	M1 A1	M1 for $\left(\frac{3+(-1)}{2}, \frac{-2+4}{2}\right)$ or finding halfway values. A1 for $(1, 1)$.
5(a)	$m = 7$	M1 A1	M1 for $3m = 26 - 5$ $(3m = 21)$. A1 for $m = 7$.

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Question	Answer	Mark	Guidance / Method
5(b)	$k = 6$	M1 A1	M1 for $4k = 15 + 9$ ($4k = 24$). A1 for $k = 6$.
6(a)	$1, 5, 9$	M1 A1	M1 for substituting $n = 1, 2, 3$. A1 for all three correct.
6(b)	77	B1	$4(20) - 3 = 80 - 3 = 77$.
6(c)	$25th$ term ($n = 25$)	B1	4n - 3 = 97 implies 4n = 100 implies n = 25.
7	$5n - 3$	M1 A1	M1 for identifying common difference $+ 5$ (seen as $5n$). A1 for $5n - 3$.
8	$x = 5$	M1 M1 A1	M1 for expanding brackets ($6x - 8 = 22$) OR dividing by 2 ($3x - 4 = 11$). M1 for isolating variable ($6x = 30$ or $3x = 15$). A1 for $x = 5$.
9	$x = 4$	M1 M1 A1	M1 for collecting x terms ($7x - 3x = 4x$). M1 for collecting numbers ($11 + 5 = 16$). A1 for $x = 4$.
10(a)	$(8, 2)$	B1	Correct coordinates.
10(b)	24 units	M1 A1	M1 for identifying side lengths: height = 5 , width = 7. A1 for $2(5 + 7) = 24$.
10(c)	35 units²	B1	$5 \times 7 = 35$.
11(a)	£87	M1 A1	M1 for $15 + 8(9) = 15 + 72$. A1 for 87.

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Question	Answer	Mark	Guidance / Method
11(b)	12 windows	M1 A1	M1 for $111 - 15 = 96$, then $96 \div 8$. A1 for 12.
11(c)	$T = 8w + 14$	M1 A1	M1 for finding common difference of 8 ($8w$). A1 for $T = 8w + 14$ (or $C = 8w + 14$).