Assessment framework:

		Cognitive domain						
		Knowing (K)		Applying (A)		Reasoning (R)		TOTAL
Content area	Number, operations and relationships (NOR)	1(1), 3(1), 4a(1), 4b(2),	5	2(1), 4c(1), 4d(2), 4e(2), 4f(1), 5(1)	8	6(2)	2	15
	Patterns, functions & algebra (PFA)	7a(1), 7b(2), 7c(2)	5	7d(2), 8(2), 9(2)	6	10(2)	2	13
	Space & shape (SS)	11(1), 12(1), 13(1), 14a(1), 15b(1)	5	14b(1), 15a(1), 16a(1), 16b(1)	4	17(3)	3	12
	Measurement (M)	18(1)	1	19(2)	2	20(2)	2	5
	Data handling (DH)	21(2)	2	22(1)	1	23(2)	2	5
	TOTAL	18		21		11		50

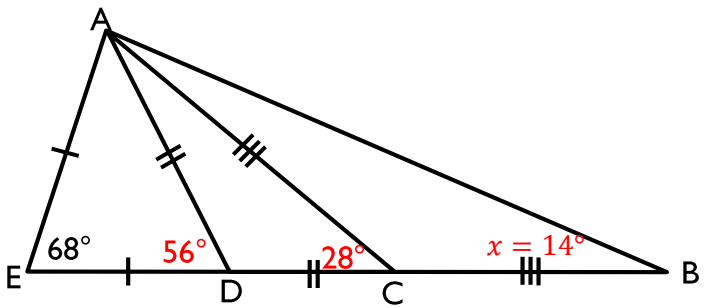
Memo:

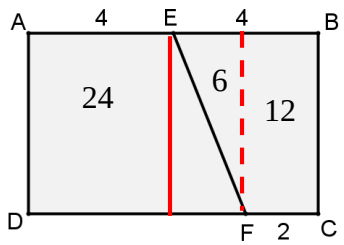
Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
1.	A	1 mrk: correct	NOR	K	1
2.	C	1 mrk: correct	NOR	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
3.	0,54	1 mrk: correct	NOR	K	1
4.a)	24	1 mrk: correct	NOR	K	1
4.b)	123 *Possible working* • $2214 - (100 \times 18) \rightarrow 414 - (10 \times 18) \rightarrow 234 - (10 \times 18) \rightarrow 54 - (2 \times 18) \rightarrow 18 - 18 \rightarrow 0$	2 mrks: correct or 1 mrk: correct working	NOR	K	2
4.c)	3	1 mrk: correct	NOR	A	1
4.d)	700 *Possible working:* • $20\% = \frac{1}{5}; 3500 \div 5 = 700$ • 10% of $3500 = 350$, Double $350 = 700$	2 mrks: correct or 1 mrk: correct working	NOR	A	2
4.e)	$\frac{11}{24}$ *Possible working:* • $\frac{5}{8} - \frac{1}{6} = \frac{15}{24} - \frac{4}{24} = \frac{11}{24}$	2 mrks: correct or 1 mark: correct working	NOR	A	2
4.f)	$\frac{3}{50}$	1 mrk: correct	NOR	A	1
5.	-2	1 mrk: correct	NOR	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
6.	100 *Possible working:* • $(2-1)+(3-2)+(4-3)+(5-4)+(6-5)+\cdots+(101-100)=1+1+1\ldots 100 \text{ times}=100$	2 mrks: correct or 1 mrk: correct working	NOR	R	2
7.a)	13	1 mrk: correct	PFA	K	1
7.b)	53 *Possible working:* • There will be a line of 25 grey dots with 2 black dots for each grey dot, plus 3 black dots at the bottom. • $(2\times 25)+3=50+3=53$	1 mrk: correct 2 mrks: correct or 1 mrk: correct working	PFA	K	2
7.c)	41 *Possible working:* • Take off the 3 black dots at the bottom and we are left with 82 black dots. Half of $82=41$ grey dots. • $2n+3=85\rightarrow 2n=82\rightarrow n=41$	2 mrks: correct or 1 mrk: correct working	PFA	K	2
7.d)	50 *Possible working:* • $2n+3=103\rightarrow 2n=103-3\rightarrow 2n=100\rightarrow n=50$	2 mrks: correct or 1 mrk: correct working	PFA	A	2
8.	$b=5\times(a+6)$ or $b=5(a+6)$	2 mrks: correct	PFA	A	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
9.	$m = n \times (n + 1)$ or $m = n \times n + n$	2 mrks: correct	PFA	A	2
10.	a) C (given) b) D c) B d) A	2 mrks: all 3 correct or 1 mrk: at least 2 correct	PFA	R	2
11.	D	1 mrk: correct	SS	K	1
12.	Always true	1 mrk: correct	SS	K	1
13.	3 units	1 mrk: correct	SS	K	1
14.a)	Right-angled, isosceles triangle	1 mrk: correct	SS	K	1
14.b)	$45°$	1 mrk: correct	SS	A	1
15.a)	130	1 mrk: correct	SS	A	1
15.b)	4 units	1 mrk: correct	SS	K	1
16.a)	GH	1 mrk: correct	SS	A	1
16.b)	$112°$	1 mrk: correct	SS	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
17.	14  	1 mrk: $A\hat{D}E = 56°$ 1 mrk: $A\hat{C}E = 28°$ 1 mrk: $x = 14°$	SS	R	3
18.	1	1 mrk: correct	M	K	1
19.	720 *Possible working:* • $\frac{1}{2} \times 32 \rightarrow 16 \times 45$ $16 \times 45 = 10 \times 45 + 5 \times 45 + 45$ $= 450 + 225 + 45$ $= 720$	2 mrks: correct or 1 mrk: correct working	M	A	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
20.	18 *Possible working:*  $6 + 12 = 18$	2 mrks: correct or 1 mrk: correct working	M	R	2
21.	Mode $= 42$ kg, Median $= 48$ kg	1 mrk: mode correct 1 mrk: median correct	DH	K	2
22.	$\frac{5}{11}$	2 mrks: correct	DH	A	2
23.	44 *Possible working* • $8 \times 11 = 88$ and $11 \times 12 = 132$, The 12th number is $132 - 88 = 44$	2 mrks: correct or 1 mrk: correct working	DH	R	2