Assessment framework:

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

Memo:

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
1.a)	-2	1 mrk: correct	NOR	A	1
1.b)	48	1 mrk: correct	NOR	K	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
1.c)	7	1 mrk: correct *Also accept ± 7, although not expected at this stage*	NOR	K	1
1.d)	32	1 mrk: correct	NOR	K	1
1.e)	27	1 mrk: correct	NOR	A	1
2.a)	114 *Possible working:* • $684 = 660 + 24$; $660 \div 6 = 110$ and $24 \div 6 = 4$; $110 + 4 = 114$ • $6 \times \mathbf{100} = 600$; $600 + (6 \times \mathbf{10}) \rightarrow 660 + (6 \times \mathbf{2}) \rightarrow 672 + (6 \times \mathbf{2}) \rightarrow 684$	2 mrks: correct or 1 mrk: correct working	NOR	K	2
2.b)	120 *Preferred working:* • $14 + 11 \rightarrow 25 + 5 \rightarrow 30 \times 4 \rightarrow 120$ *Alternative working:* • $14 \times 4 = 28 \times 2 = 56$, $11 \times 4 = 22 \times 2 = 44$; $5 \times 4 = 20$. $56 + 44 \rightarrow 100 + 20 \rightarrow 120$	2 mrks: correct or 1 mrk: correct working	NOR	K	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
2.c)	$3\frac{5}{8}$ *Possible working:* • $2\frac{1}{2}+1\frac{3}{4}=4\frac{1}{4}$; $4\frac{1}{4}-\frac{5}{8}=4\frac{2}{8}-\frac{5}{8}=3\frac{5}{8}$	2 mrks: correct or 1 mrk: correct working	NOR	A	2
3.	2 700 000 *Possible working*: • Amount remaining after house $=\frac{1}{3}$; Amount remaining after car $=\frac{1}{3}$ of $\frac{1}{3}=\frac{1}{9}$; Amount remaining after holiday $=\frac{1}{3}$ of $\frac{1}{9}=\frac{1}{27}$; So $\frac{1}{27}$ of winnings $=$ $100\ 000 \therefore 27\times 100\ 000=2\ 700\ 000$	1 mrk: $\frac{1}{9}$ after car 1 mrk: $\frac{1}{27}$ after holiday 1 mrk: correct	NOR	R	3
4.a)	A: $\times 2$ B: $+5$	2 mrks: A and B correct or 1 mrk: A or B correct	PFA	K	2
4.b)	28	1 mrk: correct (C/A)	PFA	K	1
5.a)	30 *Possible working:* • $12+3\times 6$ • 10×3	1 mrk: correct 1 mrk: valid explanation	PFA	K	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
5.b)	34 *Possible working:* • $102 \div 3$	1 mrk: correct 1 mrk: valid explanation	PFA	A	2
6.a)	15 *Possible working:* • Pic $3 = 18$ grey tiles $+5 + 5 + 5 + 5 \ldots \rightarrow$ Pic 15 • $78 - 3 \div 5 = 15$	1 mrk: correct 1 mrk: valid explanation	PFA	A	2
6.b)	Number of grey tiles = Picture number $\times 5 + 3 =$	1 mrk: correct	PFA	R	1
7.	$n = \frac{m-5}{2}$	1 mrk: correct	PFA	A	1
8.	$A = 75$ $B = 6$	1 mrk: A correct 1 mrk: B correct	PFA	R	2
9.	$t = 45°$ (base angles of an isosceles triangle are equal) $s = 90°$ (sum of angles of a triangle add up to $180°$)	1 mrk: t correct 1 mrk: reason for t 1 mrk: s correct 1 mrk: reason for s	SS	K	4
10.a)	Trapezium	1 mrk: correct	SS	K	1
10.b)	45	1 mrk: correct	SS	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
11.	Translation; 3 units right and 1 unit down	1 mrk: translation 1 mrk: 3 right and 1 down	SS	A	2
12.	5 faces; 10 edges; 6 vertices	2 mrks: all 3 correct or 1 mrk: at least 2 correct	SS	A	2
13.	6 *Possible working:* • $12 \div 4 \times 3 = 9$; so $8 \div 4 \times 3 = 6$	2 mrks: correct or 1 mrk: correct working	SS	R	2
14.	$7\frac{1}{2}$ square units	1 mrk: correct *Do not penalize if units are omitted or incorrect*	M	K	1
15.	72 *Possible working*: • Volume $= 6 \times 4 \times 3 = 72$	2 mrks: correct or 1 mrk: correct working	M	A	2
16.	240 *Possible working*: • 3 m $\div$ 0,1 m$=$ 30 layers; 8 bricks/layer $\times$ 30 layers $=$ 240 bricks	2 mrks: correct or 1 mrk: correct working	M	R	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
17.	50 *Possible working*: • 41; 46; 47; 50; 53; 53; 54 (middle number is 50)	2 mrks: correct or 1 mrk: correct working	DH	K	2
18.a)	60% or 0,6 or $\frac{6}{10}$ or $\frac{3}{5}$	1 mrk: correct	DH	A	1
18.b)	10% or 0,1 or $\frac{1}{10}$	1 mrk: correct	DH	A	1
19.	$\frac{5}{9}$ *Possible working*: • $\left(\frac{9}{18}+\frac{10}{18}+\frac{7}{18}+\frac{8}{18}+\frac{16}{18}\right)\div 5=\frac{10}{18}=\frac{5}{9}$ • Trial & error: $\left(\frac{9}{18}+\frac{7}{18}+\frac{8}{18}+\frac{16}{18}\right)\div 4=\frac{10}{18}=\frac{5}{9}$	2 mrks: correct or 1 mrk: correct working	DH	R	2