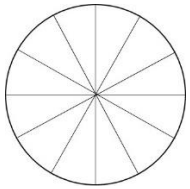
Assessment framework:

		Cognitive domain						
		Knowing (K)		Applying (A)		Reasoning (R)		TOTAL
Content area	Number, operations and relationships (NOR)	1(1), 2(1), 3(2), 5a(1), 5b(1), 5c(1), 5e(1), 5f(1)	9	4(2), 5d(1), 6(4), 8(2)	9	7(2), 9(2)	4	22
	Patterns, functions & algebra (PFA)	10(2), 11a(1)	3	11b(2)	2	11c(1)	1	6
	Space & shape (SS)	12(1), 13(1)	2	14(1), 15(1), 16(1), 17(1)	4		.	6
	Measurement (M)	18(1), 19a(1)	2	19b(1), 20(1)	2	21(2)	2	6
	Data handling (DH)	22a(1), 22b(1)	2	22c(1), 23a(1)	2	23b(1)	1	5
	TOTAL	18		19		8		45

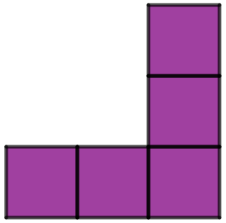
Memo:

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
1.	2 450	1 mrk: correct	NOR	K	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
2.	C	1 mrk: correct	NOR	K	1
3.a)	$\frac{7}{10}$	1 mrk: correct	NOR	K	1
3.b)	0,4	1 mrk: correct	NOR	K	1
4.	$\frac{5}{6}$ *Possible reasoning:* $\frac{4}{5}+\frac{1}{5}=1$ and $\frac{5}{6}+\frac{1}{6}=1$ Since $\frac{1}{5}>\frac{1}{6}, \frac{4}{5}<\frac{5}{6}$ *Alternate reasoning that is correct, but not expected at this stage of development is:* $\frac{4}{5}=\frac{24}{30}$ *and* $\frac{5}{6}=\frac{25}{30}$ *Since* $\frac{25}{30}<\frac{24}{30}, \frac{4}{5}<\frac{5}{6}$	1 mrk: correct 1 mrk: valid reason	NOR	A	2
5.a)	9 200	1 mrk: correct	NOR	K	1
5.b)	2 500	1 mrk: correct	NOR	K	1
5.c)	3 720	1 mrk: correct	NOR	K	1
5.d)	132	1 mrk: correct	NOR	A	1
5.e)	21	1 mrk: correct	NOR	K	1
5.f)	15,1	1 mrk: correct	NOR	K	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
6.a)	21 *Possible working:* • $147 = 140 + 7$; $140 \div 7 = 20$ and $7 \div 7 = 1$ • $7 \times 10 = 70$, so $7 \times 20 \rightarrow 140 + 7 \rightarrow 147$	2 mrks: correct or 1 mrk: correct working	NOR	A	2
6.b)	$\frac{7}{8}$ *Possible working:* • $5\frac{1}{4} = 5\frac{2}{8}$, $5\frac{2}{8} + \frac{6}{8} \rightarrow 6 + \frac{1}{8} \rightarrow 6\frac{1}{8}$	2 mrks: correct or 1 mrk: correct working	NOR	A	2
7.	$\frac{1}{12}$ *Possible working:* 	2 mrks: correct or 1 mrk: correct working	NOR	R	2
8.	15 Possible working: • 9 litres mixed at a time; 27L ÷ 9L = 3 times; 3 × 5L	2 mrks: correct or 1 mrk: correct working	NOR	A	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
9.	73 Possible working: • Groups of 6 with 1 left over: 55 ; 61 ; 67 ; 73 ; 79 ; 85 ; 91 ; 97. Groups of 7 with 3 left over: 52 ; 59 ; 66 ; 73 ; 80 ; 87 ; 94.	2 mrks: correct or 1 mrk: correct working	NOR	R	(2)
10.a)	15 750	1 mrk: correct	PFA	K	(1)
10.b)	9 100	1 mrk: correct	PFA	K	(1)
11.a)	25	1 mrk: correct	PFA	K	(1)
11.b)	81 Possible explanation: • $16 + 9 \rightarrow 25 + 11 \rightarrow 36 + 13 \rightarrow 49 + 15 \rightarrow 64 + 17 \rightarrow 81$	1 mrk: correct 1 mrk: explanation	PFA	A	(2)
11.c)	The number of blocks added increase by 2 every time	1 mrk: correct	PFA	R	(1)
12.	octagon	1 mrk: correct	SS	K	(1)
13.	hexagonal-based prism	1 mrk: correct	SS	K	(1)
14.	7	1 mrk: correct 1 *hexagonal face joined by* 6 *triangular faces.*	SS	A	(1)
15.	a hospital	1 mrk: correct	SS	A	(1)

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
16.		1 mrk: correct	SS	A	(1)
17.	B and E	1 mrk: BOTH correct	SS	A	(1)
18.	10 minutes to 8	1 mrk: correct	M	K	(1)
19.a)	7	1 mrk: correct	M	K	(1)
19.b)	72	1 mrk: correct	M	A	(1)
20.	200	1 mrk: correct	M	A	(1)
21.	Possible answers include: • $5 \times$ bottles • $4 \times$ bottles $+ 4 \times$ mugs • $3 \times$ bottles $+ 8 \times$ mugs • $2 \times$ bottles $+ 12 \times$ mugs • $1 \times$ bottle $+ 16 \times$ mugs • $20 \times$ mugs	2 mrks: 4 correct and no incorrect or 1 mrk: at least 3 correct or 4 correct and at most 1 incorrect	M	R	(2)

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
22.a)	yellow	1 mrk: correct	DH	K	(1)
22.b)	17	1 mrk: correct	DH	K	(1)
22.c)	55	1 mrk: correct	DH	A	(1)
23.a)	Half or $\frac{1}{2}$	1 mrk: correct	DH	A	(1)
23.b)	$\frac{1}{8}$	1 mrk: correct	DH	R	(1)