Assessment framework:

		Cognitive domain						
		Knowing (K)		Applying (A)		Reasoning (R)		TOTAL
Content area	Number, operations and relationships (NOR)	1(1), 2(1), 3(1), 4a(2), 5(2)	7	4b(2), 6(2), 7(2)	6	8(3)	3	16
	Patterns, functions & algebra (PFA)	9a(2),10(2), 11(2)	5	9b(2), 12(1), 13(2)	5	14(2)	2	12
	Space & shape (SS)	15(2), 16(1), 17(1)	4	18(4), 20(1)	5	19(3)	3	12
	Measurement (M)	21a(1)	1	21b(1), 22(2)	3	23(2)	2	5
	Data handling (DH)	24(2)	2	25(1), 25(1)	2		.	4
	TOTAL	19		21		10		50

Memo:

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
1.	1,3	1 mrk: correct	NOR	K	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
2.	$\frac{7}{5}$	1 mrk: correct	NOR	K	1
3.	400	1 mrk: correct	NOR	K	1
4.a)	150 *Preferred working:* • $18 + 24 \rightarrow 43 + 8 \rightarrow 50 \times 3 \rightarrow 150$ *Alternative working:* • $18 \times 3 = 30 + 24 = 54, 24 \times 3 = 60 + 12 = 72; 8 \times 3 = 24. 54 + 72 \rightarrow 126 + 24 \rightarrow 150$	2 mrks: correct or 1 mrk: correct working	NOR	K	2
4.b)	$\frac{31}{20}$ or $1\frac{11}{20}$ *Possible working*: • $\frac{3}{4} + \frac{4}{5} = \frac{15}{20} + \frac{16}{20}$ $= \frac{31}{20}$	1 mrk: equivalent fractions with common denominator and 1 mrk: correct answer	NOR	A	2
5.	90 *Possible working:* • 50% of $150 = 75$ and 10% of $150 = 15$. • $\frac{3}{5}$ of $150 = 150 \div 5 \times 3 = 90$	2 mrks: correct or 1 mrk: correct working	NOR	K	2

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
6.	1470 *Possible working:* • 10% of $R2100 = R210$, so 30% of $R2100 = R630$. $2100 - 630 = 1470$ • 70% of $R2100 = 7 \times R210 = R630$	2 mrks: correct or 1 mrk: correct working	NOR	A	2
7.	Sally $= 136$; Colin $= 68$; Themba $= 34$ *Possible working:* • Sally, Colin, Themba and Buli share the money in the ratio $8:4:2:1$. $8:4:2:1 = 136:68:34:17$ • $17 \times 2 \rightarrow 34 \times 2 \rightarrow 68 \times 2 \rightarrow 136$	2 mrks: 3 correct or 2 correct and valid working or 1 mrk: 2 correct with no working or 1 correct	NOR	A	2

<table>
<tr><th>Question</th><th>Correct solution(s)</th><th>Comment</th><th>Content area</th><th>Cognitive domain</th><th>Mark allocation</th></tr>
<tr><td>8.</td><td>8
Possible working:
• Guess and check, preferably in a table, i.e.
<table>
<tr><th>Day 1 (Guess)</th><th>Day 2 (+6)</th><th>Day 3 (+6)</th><th>Day 4 (+6)</th><th>Day 5 (+6)</th><th>Total</th></tr>
<tr><td>2</td><td>8</td><td>14</td><td>20</td><td>26</td><td>70×</td></tr>
<tr><td>5</td><td>11</td><td>17</td><td>23</td><td>29</td><td>85×</td></tr>
</table>
Etc.
• $\square + (\square + 6) + (\square + 12) + (\square + 18) + (\square + 24) = 100$, so $5 \times \square + 60 = 100$
$5 \times \square = 40$
• $5 \times n + 60 = 100$
$5 \times n = 40$
$n = 8$</td><td>2 mrks: correct and
1 mrk: valid working</td><td>NOR</td><td>R</td><td>3</td></tr>
<tr><td>9.a)</td><td>23
Possible working:
• $11 + 3 \rightarrow 14 + 3 \rightarrow 17 + 3 \rightarrow 20 + 3 \rightarrow 23$
• $11 + (4 \times 3) = 11 + 12 = 23$
• $7 \times 3 + 2$
• $7 \times 2 + 9$</td><td>2 mrks: correct or
1 mrk: correct working</td><td>PFA</td><td>K</td><td>2</td></tr>
</table>

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
9.b)	302 *Possible working:* • $11 + (97 \times 3) = 11 + 291 = 302$ • $100 \times 3 + 2$ • $100 \times 2 + 102$	2 mrks: correct or 1 mrk: correct working	PFA	A	2
10.	A: $\times 6$ and B: $+ 2$	2 mrks: both correct or 1 mrk: 1 correct	PFA	K	2
11.	$(5 + 3) \times 7$	1 mrk: correct	PFA	A	1
12.	$m = 2n + 3$ or $m = n \times 2 + 3$	1 mrk: correct	PFA	A	1
13.	31	2 mrks: correct $(64 - 2) \div 2$	PFA	R	2
14.a)	49	1 mrk: correct	PFA	R	1
14.b)	Each term is 7 times the previous term.	1 mrk: correct	PFA	R	1
15.a)	Square and rectangle	1 mrk: correct	SS	K	1
15.b)	Square, rectangle, rhombus and parallelogram	1 mrk: correct	SS	K	1
16.	trapezium	1 mrk: correct	SS	K	1
17.	1,2	1 mrk: correct	SS	K	1
18.a)	3	1 mrk: correct	SS	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
18.b)	104	1 mrk: correct	SS	A	1
18.c)	76 *Possible working:* • $180 - 2 \times 52 = 76$	1 mrk: correct (C/A) 1 mrk: correct working *Students are expected to use the sum of interior angles of triangle, not co-interior angles between parallel lines.*	SS	A	2
19.	38 *Possible working:* $\hat{A} = A\hat{C}B = C\hat{B}A = 60°$ (equilateral triangle); $B\hat{C}D = 131° - 60° = 71°$; $B\hat{C}D = D\hat{B}C = 71°$ (isosceles triangle); $C\hat{D}B = 180° - 2 \times 71°$	1 mrk: correct 1 mrk: $A\hat{C}B = 60°$ 1 mrk: $B\hat{C}D = 71°$ or $D\hat{B}C = 71°$	SS	R	3
20.	D	1 mrk: correct	SS	A	1
21.a)	$1\ 000$	1 mrk: correct	M	K	1
21.b)	$0{,}04$	1 mrk: correct	M	A	1

Question	Correct solution(s)	Comment	Content area	Cognitive domain	Mark allocation
22.	3 375 *Possible working:* • $15 \times 15 \rightarrow 225 \times 15 \rightarrow 3375$	2 mrk: correct or 1 mrk: correct working *Learners can multiply by 15 by multiplying by 10, halving to multiply by 5 and adding the results.*	M	A	2
23.	20 *Possible working:* • $\square + \square + (\square + 5) = 50$, so $3 \times \square = 45$; $\square = 15$; $15 + 5 = 20$	2 mrk: correct or 1 mrk: correct working	M	R	2
24.a)	27	1 mrk: correct	DH	K	1
24.b)	28	1 mrk: correct	DH	K	1
25.	$\frac{1}{2}$ or 0,5 or 50%	1 mrk: correct	DH	A	1
26.	$\frac{3}{7}$	1 mrk: correct	DH	A	1