



**General marking note:**

1. Give full marks for answers only, unless otherwise stated.
2. Accept any alternative correct solution that is not included in the memorandum.
3. CA refers to consistent accuracy. See clarification in question 10.3.

**MARKS: 75**

This memorandum consists of 4 pages.

QUESTION		EXPECTED ANSWER	CLARIFICATION	MARK	TOTAL
1.	1.1	D ✓		1	
	1.2	C ✓		1	
	1.3	A ✓		1	
	1.4	A ✓		1	
	1.5	D ✓		1	
	1.6	B ✓		1	
	1.7	A ✓		1	
	1.8	B ✓		1	
	1.9	D ✓		1	
	1.10	B ✓		1	
2.		300 000 ✓			1
3.		387 ✓	387 :1 mark		1
4.		32 ✓	(24 ÷ 6 = 4) 36 – 4 = 32 :1 mark		1
5.		59 ✓	59 :1 mark		1
6.		96,1 ✓	96,1 :1 mark		1
7.		123,33    123,3    123,03 ✓	:1 mark		1
8.		29 ✓	29 :1 mark		1
9.	9.1	Common fraction = $\frac{1}{2}$ ✓	$\frac{1}{2}$ :1 mark or $\frac{10}{20}$ or $\frac{5}{10}$	1	
	9.2	Decimal fraction = 0,5 ✓	0,5 :1 mark	1	
	9.3	Percentage = 50% ✓	50% :1 mark	1	3
10.	10.1	$\begin{array}{r} 643\ 189 \\ 12\ 387 \\ + \quad 4\ 230 \\ \hline 659\ 806 \\ \checkmark \quad \checkmark \end{array}$ <p>Accept any other alternative correct method e.g breaking down or building up etc.</p>	<p>Correct answer :2 marks</p> <p>806 :1 mark</p> <p>659 :1 mark</p> <p>Mark each one as a unit and no CA applies.</p>	2	

10.2	$\begin{array}{r} 976\ 453 \\ - \underline{68\ 397} \\ \hline 908\ 056 \\ \checkmark \quad \checkmark \end{array}$ <p>Accept any other alternative correct method e.g breaking down or building up etc.</p>	<p>Correct answer :2 marks</p> <p>908 :1 mark</p> <p>056 :1 mark</p> <p>Mark each one as a unit and no CA applies.</p>	2									
10.3	<table border="1"> <tbody> <tr> <td> <math display="block">\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55\ 256 \quad \checkmark \\ +138\ 140 \quad \checkmark \\ \hline 193\ 396 \quad \checkmark \end{array}</math> </td> <td> <p>or</p> <math display="block">\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 7 \times 4 \checkmark \\ = 48\ 349 \times 4 \checkmark \\ = 193\ 396 \checkmark \end{array}</math> </td> <td> <p>or</p> <math display="block">\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 4 \times 7 \checkmark \\ = 27\ 628 \times 7 \checkmark \\ = 193\ 396 \checkmark \end{array}</math> </td> </tr> <tr> <td colspan="3" style="text-align: center;">Example of CA:</td> </tr> <tr> <td> <math display="block">\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138140 \quad \checkmark \\ \hline 193396 \quad \checkmark \end{array}</math> </td> <td> <math display="block">\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138145 \times \\ \hline 193401 \quad \checkmark \end{array}</math> </td> <td> <math display="block">\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55156 \times \\ +138140 \quad \checkmark \\ \hline 193296 \quad \checkmark \end{array}</math> </td> </tr> </tbody> </table>	$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55\ 256 \quad \checkmark \\ +138\ 140 \quad \checkmark \\ \hline 193\ 396 \quad \checkmark \end{array}$	<p>or</p> $\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 7 \times 4 \checkmark \\ = 48\ 349 \times 4 \checkmark \\ = 193\ 396 \checkmark \end{array}$	<p>or</p> $\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 4 \times 7 \checkmark \\ = 27\ 628 \times 7 \checkmark \\ = 193\ 396 \checkmark \end{array}$	Example of CA:			$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138140 \quad \checkmark \\ \hline 193396 \quad \checkmark \end{array}$	$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138145 \times \\ \hline 193401 \quad \checkmark \end{array}$	$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55156 \times \\ +138140 \quad \checkmark \\ \hline 193296 \quad \checkmark \end{array}$	<p>CA</p> <p>Correct answer :3 marks</p> <p>55 256 :1 mark</p> <p>138 140 :1 mark</p> <p>193 396 :1 mark</p> <p>Any other alternative correct method including Napier's Bones method.</p>	3
$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55\ 256 \quad \checkmark \\ +138\ 140 \quad \checkmark \\ \hline 193\ 396 \quad \checkmark \end{array}$	<p>or</p> $\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 7 \times 4 \checkmark \\ = 48\ 349 \times 4 \checkmark \\ = 193\ 396 \checkmark \end{array}$	<p>or</p> $\begin{array}{l} 6\ 907 \times 28 \\ = 6\ 907 \times 4 \times 7 \checkmark \\ = 27\ 628 \times 7 \checkmark \\ = 193\ 396 \checkmark \end{array}$										
Example of CA:												
$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138140 \quad \checkmark \\ \hline 193396 \quad \checkmark \end{array}$	$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55256 \quad \checkmark \\ +138145 \times \\ \hline 193401 \quad \checkmark \end{array}$	$\begin{array}{r} 6907 \\ \times \underline{28} \\ \hline 55156 \times \\ +138140 \quad \checkmark \\ \hline 193296 \quad \checkmark \end{array}$										
10.4	$\begin{array}{r} 7,4 \\ + \underline{0,82} \\ \hline 8,22 \\ \checkmark \quad \checkmark \end{array}$	$7,4 + 0,82 = 8,22$ <p style="text-align: center;"><math>\checkmark \quad \checkmark</math></p>	<p>Correct answer :2 marks</p> <p>8 :1 mark</p> <p>0,22 :1 mark</p>	2								
10.5	$\begin{array}{l} 7\frac{3}{5} + 4\frac{4}{5} \\ = 7 + \frac{3}{5} + 4 + \frac{4}{5} \checkmark \\ = 11 + \frac{7}{5} \\ = 12\frac{2}{5} \checkmark \end{array}$	$\begin{array}{l} 7\frac{3}{5} + 4\frac{4}{5} \\ = \frac{38}{5} + \frac{24}{5} \checkmark \\ = \frac{62}{5} \\ = 12\frac{2}{5} \checkmark \end{array}$	<p>Correct answer :2 marks</p> <p>method :1 mark</p> <p><math>12\frac{2}{5}</math> :1 mark</p> <p>Apply CA</p>	2								
10.6	$\begin{array}{l} 4\frac{4}{11} - 2\frac{7}{11} \\ = 3 + \frac{15}{11} - 2 - \frac{7}{11} \checkmark \\ = 1 + \frac{8}{11} \\ = 1\frac{8}{11} \checkmark \end{array}$	$\begin{array}{l} 4\frac{4}{11} - 2\frac{7}{11} \\ = \frac{48}{11} - \frac{29}{11} \checkmark \\ = \frac{19}{11} \\ = 1\frac{8}{11} \checkmark \end{array}$	<p>Correct answer :2 marks</p> <p>method :1 mark</p> <p><math>1\frac{8}{11}</math> :1 mark</p> <p>Apply CA</p>	2								

	10.7	$\frac{3}{4}$ of 120 or $= 120 \div 4 \times 3 \checkmark$ $= 90 \checkmark$	$\frac{3}{4}$ of 120 $= \frac{3}{4} \times 120$ $= 3 \times 30 \checkmark$ (120 ÷ 4 = 30) $= 90 \checkmark$	Correct answer : 2 marks  90 : 1 mark Calculation: 1 mark Apply CA			2	15
11.		212 rem 20 $\checkmark$ $\begin{array}{r} 43 \overline{)9136} \\ - 86 \checkmark \\ \hline 53 \\ - 43 \checkmark \\ \hline 106 \\ \underline{86} \\ 20 \end{array}$		Correct answer :3 marks 86 :1 mark 43 :1 mark 212 rem 20 :3 marks  Apply CA				3
12.	12.1	$482 \div 36 \checkmark = 13$ remainder 14  $\begin{array}{r} 13 \\ 36 \overline{)482} \\ - 36 \checkmark \\ \hline 122 \\ - 108 \\ \hline 14 \end{array}$  Each learner gets 13 beads $\checkmark$		Correct answer :3 marks  Implied division :1 mark  Calculation :1 mark  13 :1 mark			3	
	12.2	Number of beads left = 14 $\checkmark$		remainder 14:1 mark Apply CA from 12.1 to 12.2			1	4
13.		Thabo : Sam : Total = 7 : 5 : 12 $\checkmark$  Thabo's share = $\frac{7}{12} \times R1440 \checkmark$ = 7 x R120 = R840 $\checkmark$		12 : 1 mark Correct operation : 1 mark R840 : 1 mark  Apply CA				3
14.		16 $\checkmark$ (1 ; 4 ; 9 ; ..... )		16 :1 mark If the learners draw the next diagram correct :1 mark				1
15.	15.1	12 $\checkmark$		12 :1 mark			1	
	15.2	48 $\checkmark$		48 :1 mark			1	2
16.		Pattern number is 15 $\checkmark$ Number of dots = 20 $\checkmark$ Rule $x3 + 2$		15 :1 mark 20 :1 mark				2

17.		9 ✓ Rule $\div 3$	9 :1 mark		1
18.		Front side or backside ✓	1 mark		1
19.	19.1	Acute angle ✓	1 mark	1	
	19.2	Reflex angle ✓	1 mark	1	2
20.	20.1	Parallelogram ✓	1 mark	1	
	20.2	Trapezium ✓	1 mark	1	
	20.3	Rectangle or Parallelogram ✓	Accept either 1 mark	1	3
21.		Number of vertices = 12 ✓ Number of edges = 18 ✓ Number of faces = 8 ✓	12 :1 mark 18 :1 mark 8 :1 mark		3
22.	22.1	Charlie ✓	1 mark	1	
	22.2	5,2 m ✓	1 mark	1	2
23.	23.1	$2\frac{1}{2}$ kg ✓ or 2,5 kg	1 mark	1	
	23.2	2 500 g ✓	2 500 g :1 mark Apply CA from 23.1 correctly convert reading from 23.1	1	2
24.		No. of litres left = $60 - 6,7$ ✓ = 53,3 ✓	Correct answer :2 marks $60 - 6,7$ :1 mark		2
25.	25.1	5 hours ✓	5 hrs :1 mark	1	
	25.2	19:45 ✓	19:45 :1 mark	1	2
26.		Mode = 18 ✓	18 :1 mark		1
27.	27.1	Susan ✓	1 mark	1	
	27.2	Number of stars = $120 - (30 + 15 + 20 + 45)$ ✓ = $120 - 110$ = 10 ✓	Calculation :1 mark Answer :1 mark Apply CA	2	
	27.3	30 out of 120 stars = $\frac{1}{4}$ of the stars ✓ = 25% of the stars ✓	Calculation :1 mark Answer :1 mark Apply CA	2	5
28.		1 three-legged table and 5 four-legged tables ✓  or  5 three-legged tables and 2 four-legged tables ✓  (Accept any one of the two options)	Multiples of 3: 3; 6; 9; 12; 15; 18; ... Multiples of 4: 4; 8; 16; 20; ...  $3 + 20 = 23$ or $15 + 8 = 23$  $1 \times 3 + 5 \times 4 = 23$ or $5 \times 3 + 2 \times 4 = 23$	1	1
<b>TOTAL</b>					<b>75</b>