

ANNUAL NATIONAL ASSESSMENTS 2015 GRADE 5 MATHEMATICS MEMORANDUM

MARKS: 60

This memorandum consists of 4 pages

Important information:

- 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 7.1

1.9 B \checkmark 1 2. 998 \checkmark ; 996 \checkmark 1 mark for each 2 3. 19 \checkmark 1 mark 4. 19 \checkmark 1 mark 1 x3 +1 = 4 2x3 +1 = 7 3x3 +1 = 10 4x3 +1 = 13 5x3 +1 = 16 6x3 +1 = 19 5. $\frac{20}{25}$ = $\frac{4}{5}$ \checkmark	Que	stion	Expected Answer	Clarification	Mark	Total
1.3 C \	1.	1.1			1	
1.4 B		1.2	B✓		1	
1.5 D \(\) 1.6 A \(\times \) 1 1.7 C \(\times \) 1 1.8 D \(\times \) 1 1.9 B \(\times \) 1 1.9 B \(\times \) 1 1 mark for each 2 3. 38 \(\times \) 1 1 mark 1 1 x3 + 1 = 4 2 x3 + 1 = 10 4 x3 + 1 = 10 4 x3 + 1 = 16 6 x3 + 1 = 19 1 5. \(\frac{20}{25} = \frac{4}{5} \times \) \(\times \) 1 6. \(\frac{6.1}{25} \) 84 509 +33 095 117 604 \(\times \) 0 84 509 = 80 000 + 4 000 + 500 + 90 + 14 = 117 604 \(\times \) 0 80 000 + 4 000 + 500 + 90 + 14 = 117 604 \(\times \) 0 80 000 + 30 000 + 3 000 + 500 + 90 + 9 + 5 = 80 000 + 30 000 + 500 + 90 + 14 = 117 604 \(\times \) 1 Example of CA: 84 509 +33 095 127 604 17 694 Example of CA: 84 509 +33 095 127 604 17 694 V \(\times \) X Example of CA: 11 hundreds, tens and units correct (604) and thousands wrong: 1 mark. Thousands correct (117) and hundreds, tens and units correct (117) and hundreds, tens and units correct (117) and hundreds, tens and units wrong: 1		1.3	C ✓		1	
1.6		1.4	B ✓		1	
1.7		1.5	D✓		1	
1.8 D / 1.9 B / 1.9 B / 1 mark for each 2 2 3. 3. 38 / 1 mark for each 2 2 3. 3. 4. 19 / 1 mark for each 1 1 mark for each 2 2 3. 3. 4. 19 / 1 mark for each 1 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 2 2 3. 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 2 3. 4. 19 / 1 mark for each 1 1 mark 1 mark for each 1 1 mark fo		1.6	A ✓		1	
1.8 D \(\) 1.9 B \(\) 2. 998 \(\) 996 \(\) 3. 38 \(\) 4. 19\(\) 4. 19\(\) 5. 20\(\frac{20}{25} = \frac{4}{5} \) 6. 6.1 84 509 \(\frac{4}{5} \) 84 509 = 80 000 + 4 000 + 500 + 90 + 5 \(\) 85 \(\) 84 509 = 80 000 + 4 000 + 500 + 90 + 14 \(\) 85 \(\) 84 509 = 80 000 + 3 000 + 3000 + 90 + 5 \(\) 85 \(\) 84 509 = 80 000 + 3 000 + 30 000 + 90 + 5 \(\) 85 \(\) 85 \(\) 86 000 + 3 000 + 3 000 + 3 000 + 3 000 + 90 + 14 \(\) 87 \(\) 88 500 \(\) 80 000 + 4 000 + 500 + 9 + 30 000 + 3 000 + 90 + 9 + 5 \(\) 80 000 + 3 0000 + 4 000 + 500 + 90 + 14 \(\) 81 \(\) 81 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 509 \(\) 84 500 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(\) 85 600 \(1.7	C✓		1	
1.9 B ✓ 2. 998 ✓; 996 ✓ 1 mark for each 2 1 1 2. 197 ✓ 1 mark 1 x3 +1 = 4 2 x3 +1 = 7 3 x3 +1 = 10 4 x3 +1 = 16 6 x3 +1 = 19 5. 20 25 = 4/5 ✓ 6. 6.1 84 509 + 33 095 117 604 ✓ ✓ ✓ 0r 84 509 = 80 000 + 4 000 + 500 + 90 + 9 + 5 ✓ Sum = 110 000 + 7 000 + 500 + 90 + 14 = 117 604 ✓ 0r 80 000 + 4 000 + 500 + 90 + 14 = 117 604 ✓ 0r 80 000 + 4 000 + 500 + 90 + 14 = 117 604 ✓ 0r 80 000 + 4 000 + 500 + 90 + 14 = 117 604 ✓ 0r 80 000 + 4 000 + 500 + 90 + 9 + 5 ✓ Example of CA: 84 509		1.8			1	9
2. 998 /; 996 / 1 mark for each 2 3. 38 / 1 4. 19/ 19/ 19/ 19/ 19/ 19/ 19/ 19/ 19/ 19/					1	
3.	2.	1	998 ✓ : 996 ✓	1 mark for each	2	2
4.			·			1
5.	4.		19✓	$1 \times 3 + 1 = 4$ $2 \times 3 + 1 = 7$ $3 \times 3 + 1 = 10$ $4 \times 3 + 1 = 13$ $5 \times 3 + 1 = 16$	1	1
6. 84 509	5.		$\frac{20}{25} = \frac{4}{5} \checkmark$	0.00 11 = 10		1
	6.	6.1	$\begin{array}{l} +33\ 095 \\ \hline 117\ 604 \\ \hline \checkmark & \checkmark \\ \\ \text{or} \\ \\ \hline \\ 84\ 509 &= 80\ 000 + 4\ 000 + 500 + 00 + 9 \\ \hline \\ +33\ 095 &= 30\ 000 + 3\ 000 + 000 + 90 + 5 \\ \hline \\ \underline{\text{Sum}} &= \underline{110\ 000 + 7\ 000 + 500 + 90 + 14} \\ \hline \\ = \underline{117\ 604} \checkmark \\ \\ \text{or} \\ \hline \\ 80\ 000 + 4\ 000 + 500 + 9 + 30\ 000 + 3\ 000 + 90 + 9 + 5 \\ \hline \\ = 80\ 000 + 30\ 000 + 4\ 000 + 3\ 000 + 500 + 90 + 9 + 5 \\ \hline \\ = 110\ 000 + 7\ 000 + 500 + 90 + 14 \\ \hline \\ = \underline{117\ 604} \checkmark \\ \\ \hline \\ Example of CA: \\ \hline \\ 84\ 509 \\ \hline \\ +33\ 095 \\ \hline \\ \underline{127\ 604} \\ \\ \hline \end{array}$	Hundreds, tens and units correct (604) and thousands wrong: 1 mark. Thousands correct (117) and hundreds, tens and units wrong: 1		

	6.2	96 974	91 593 : 2 marks		
	0.2		91 393 . Z IIIaiks		
		- <u>5 381</u>	500 . 4		
		91 593	593 : 1 mark		
		√ ✓	91 : 1 mark		
			Apply CA		
		or			
		96 974 = 90 000 + 6 000 + 800 + 170 + 4			
		-5381 = 00000 + 5000 + 300 + 80 + 1			
		<u>Sum</u> = <u>90 000 + 1 000 + 500 + 90 + 3</u>			
		= 91 593 √			
		= <u>31 000</u> '			
		or			
		96974 - 5000 → 91974 - 300 → 91674 - 80			
		→ 91594 - 1→ 91593 ✓✓		2	
	6.3	547 or 547 x (40 + 2)	A mark for each		
		\times 42 = (547 x 40) + (547 x 2) \checkmark	correct step.		
		$1094\checkmark$ = 21 880 + 1 094 \checkmark	Answer only:		
		+21 880√ = 22 974√	3 marks.		
		<u>22 974</u> √	Apply CA		
			, ipply OA		
		or 547 x 42 or 547 x 42			
		=547 x 6 x 7 \(\square =547 x 7 x 6 \(\square \)			
		=3 282 x 7 ✓ =3 829 x 6 ✓			
		= <u>22 974</u> ✓ = <u>22 974</u> ✓			
				3	
	6.4	774 ÷ 6 ÷ 3 ✓			
		= 129 ÷ 3 ✓	Correct quotient:		
		= 43 ✓	1 mark.		
			Correct		
		or	calculations:		
		oi e	2 marks.		
		774÷ 3 ÷ 6 ✓	Answer only:		
		= 258 ÷ 6 ✓	3 marks.		
		= 43 ✓	Apply CA		
		or			
		4 3 🗸			
		18 7 7 4			
		- 7 2 ✓ - 4 × 18			
		5 4 - 3×18			
		U 4 - 3 X 10			
		<u>5 4</u> ✓		3	
		0			
	6.5	2 5			
	0.5	$5\frac{2}{7} + 3\frac{5}{7}$	Whole number:		
		$=5+3+\frac{2}{7}+\frac{5}{7}$	1 mark		
			Common fraction:		
		$= 8 + \frac{7}{7} \checkmark$	1 mark		
		= 9 1	Answer only:		
			2 marks	_	
				2	
	6.6	C 4 3	Whole number:		
	0.0	$6-4-\frac{3}{4}$	1 mark		
		$=2-\frac{3}{4}$	Common fraction:		
		1	1 mark		
		$=1\frac{1}{4}$	Answer only:		14
		· ·	2 marks	2	17
		I .			

7.		4d 10h + 7d 16h = 11d 26h✓	Answer only:		
		= 12d 2h√	3 marks		
		= 1w 5d 2h√		3	3
8.				1	1
9.		Number of $km = 5 \times 2 \times 8$			
		= 80 ✓			
		or Distance = $8 \times 5 \times 2 \ km$			
		= 80 km ✓	A novement w		
			Answer only: 2 marks	2	2
10.	10.1	Amount = 10 × R4 750 ✓			
		= R47 500 ✓	Correct operation: 1 mark Correct calculation: 1 mark Answer only: 2 marks	1 1	
	10.2	Amount = R47 500 ÷ 2 ✓	Correct operation:		
		= R23 750 ✓	1 mark		
		or Amount = R4 750 × 5✓	Correct calculation: 1 mark	1 1	
		Amount = R4 750 × 5*	Answer only:	I	
		=R23 750 ✓	2 marks		4
11	11.1. 11.2	2 063 \checkmark 3,5 or $3\frac{1}{2}$ \checkmark		1 1	2
12.	12.1	56 ✓		1	
	12.2.	100 ✓		1	2
13.		Triangles and Rectangles ✓✓		1	
		5 faces ✓		1	
				1	3
14.		_			
			Correct shape: 1 mark Correct size: 1 mark	2	2
15.	15.1	is greater than ✓		1	
	15.2	is smaller than ✓		1	2

16.	16.1	6°C√		1	
	16.2	Difference = 24°C − 6°C ✓		1	
		=18°C✓		1	3
17.					3
		Shoe sizes Tally Frequency			
		2 /// 3 3 /////// √ 12		1	
		4 ##.// 7		4	
		5 /// 3 ✓ 6 / ✓ 1		1 1	
	17.1	Size 3 ✓	3 : 1 mark	1	
	17.2	3 learners ✓	3 : 1 mark		
	17.3	Difference = 7 _ 1		1	
	17.3		6 : 1 mark		
		= 6 ✓		4	6
18.		For 15 stars:		1	ь
				4	
		1 rocket made 3 stars and ✓		1	
		3 rockets made 4 stars, ✓		1	
					2
					_
			TOTAL	60	