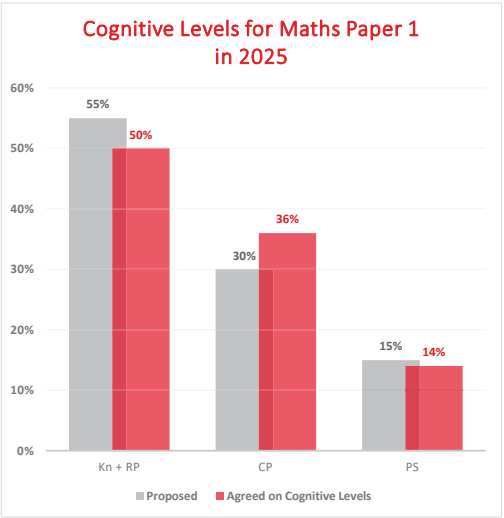
2025 AMESA MATHS P1 EXAM REVIEW hosted by TAS

Q. no	Procedure	Allocation of marks to cognitive levels				Marks	Total	Comments
		Kn	RP	CP	PS			
		20%	35%	30%	15%			
		3%	47%	36%	14%	150		
Q1:	**Algebra [25]**							
1.1.1	factorised quadratic equation	2				2	25	
1.1.2	quadratic equation		4			4		
1.1.3	quadratic inequality		4			4		
1.1.4	exponential equation			4		4		
1.1.5	surd equation			5		5		
1.2	simultaneous equations, word problem			6		6		
Q2:	**Patterns & Sequences [15]**							
2.1.1	show that t = - 2		3			3	15	
2.1.2	calculate T_{25}		3			3		
2.1.3	sum of infinite series		2			2		
2.2.1	difference between T_6 & T_{14}			2		2		
2.2.2	calculate value of k in AS involving sigma			5		5		
Q3:	**Patterns & Sequences [10]**							
3.1	depth of torpedo at end of first 5 seconds		2			2	10	
3.2	show depth of torpedo at end of n seconds		3			3		
3.3	calculate maximum depth		3			3		
3.4	calculate how many seconds at 104 m 2nd time		2			2		
Q4:	**Functions [10]**							
4.1	calculate value of t using log graph		1			1	10	
4.2	write down coordinates of A at x-intercept		1			1		
4.3	determine equation of f^{-1} (exp graph)		2			2		
4.4	write down equation of the asymptote (exp graph)		1			1		
4.5	draw exponential graph		3			3		
4.6	determine y-values of h (translation 5 right)				2	2		Not enough space in answer book
Q5:	**Functions [18]**							
5.1	domain of g (hyperbola)	1				1	18	
5.2	range of f (parabola)	1				1		Confusion as to whether you have to write y e R if not in interval notation. Need clarification that marking centres are marking this the same way.
5.3.1	x-values for g(x) ≤ f(x)		2			2		
5.3.2	x-values for f(x) < 6			2		2		
5.4	show equation of parabola		3			3		Only 3 marks
5.5	calculate length of MT			6		6		
5.6	determine equation of tangent to f at D		3			3		
Q6:	**Functions [8]**							
6.1	coordinates of x-intercept of g in terms of p	1				1	8	
6.2	determine equation of f				5	5		6 marks?
6.3	describe the transformation of g . . . axis of symmetry			2		2		This question is not accessible if 6.2 couldn't be done.

Algebra and Equations (inequalities)	25 ± 3	25
Patterns and Sequences	25 ± 3	25
Finance, Growth and Decay	15 ± 3	15
Functions and Graphs	35 ± 3	36
Differential Calculus	35 ± 3	33
Probability	15 ± 3	16
Total		150



2025 AMESA MATHS P1 EXAM REVIEW hosted by TAS

Q. no	Procedure	Allocation of marks to cognitive levels				Marks	Total	Comments
		Kn	RP	CP	PS			
		20%	35%	30%	15%			
		3%	47%	36%	14%	150		
Q7:	**Finance [15]**							
7.1	cost of holiday in 5 years' time		2			2	15	Doesn't say compound interest.
7.2	calculate accumulated amount (immediate payment)			4		4		Extra bracket needed.
7.3.1	calculate how long to repay the loan (when granted)			5		5		Had to account for months not used.
7.3.2	calculate value of final payment			4		4		
Q8:	**Calculus [10]**							
8,1	first principles		4			4	10	
8.2.1	derivative (basic)		2			2		
8.2.2	derivative (fractions)		4			4		
Q9:	**Calculus [17]**							
9.1	calculate coordinates of E (local minimum)		4			4	17	
9.2	x-values of concave down		3			3		
9.3	f(x) . f''(x) < 0 given (2; 0)			4		4		Tough timewise. Silver calculator is an advantage. Too few marks.
9.4	y = - 11x + t must intersect f at 3 distinct points				6	6		
Q10:	**Calculus [6]**							
10.1	vol of cylinder given circumference = x & height = h			3		3	6	Too few marks.
10.2	calculate value of x that will maximise volume		3			3		
Q11:	**Probability [16]**							
11.1.1	show that e = 84 (male & juice independent)		3			3	16	
11.1.2	probability female prefers energy drinks		3			3		Ambiguous. Is the sample space 210 or 120? If 120, is conditional probability examinable?
11.2	calculate number of cups coffee, any given day				4	4		75% chance of rain does not mean 75% of days are rainy.
11.3.1	AB . . . total no. of possible ways to finish			2		2		
11.3.2	probability 2 or more runners after A and before B				4	4		Wording issue. Doesn't specifically say that Andrew beat Bongi. Should have said that Andrew always finishes before Bongi. Many people assumed Bongi couldn't finish first. Others assumed that Bongi still finishes immediately after Andrew.
		5	70	54	21	150		