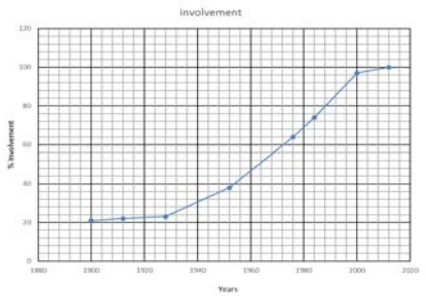
2016 Grade 12 Trial Examinations - Paper 1

Overall notes:
Rounding: -1 once PER PAPER
Units: -1 once PER PAPER

Total: 150

Annexure A Summary

Question	Working	Marks	Criteria	TL1	TL2	TL3	TL4	FIN	MEA	MAP	DAT	PROB
1.1	Mr. S. James 23 Waternoose Crescent, Pelham	2	1 mark: Mr. S. James 1 mark: full address (no code nec.)	2				2				
1.2	Electricity, Water, Refuse, Sewerage NOT rates (it's not a service)	2	1 mark: At least 1 correct 2 marks: Other two must also be correct	2				2				
1.3	1 310 000 One million, three hundred and ten thousand	2	1 mark: correct number 1 mark: correct words (CA)	2				2				
1.4	20 May 2016	2	1 mark: 20 May 1 mark: 2016	1	1			2				
1.5	3 cents less and it was carried over to the next month	2	1 mark: difference 1 mark: carried over	2				2				
1.6	R2 201,50 x 12 = R26 418 % = R26 418 / R1 295 000 x 100% = 2,04%	4	1 mark: x 12 1 mark: method 1 mark: rateable value 1 mark: answer (CA)		4			4				
1.7.1	7012 - 1948 = 5 064	2	1 mark: method 1 mark: answer	2				2				
1.7.2	R % 1 799,44 : 114 **220,98** : 14	2	1 mark: method 1 mark: answer (No CA)	2				2				
1.7.3	R1 799,44 - R220,98 = R1 578,46	2	1 mark: method 1 mark: answer (No CA)	2				2				
1.8	30 x 85% = 25,5 units	3	1 mark: read 30 1 mark: method 1 mark: answer (with units)		3			3				
1.9	0 - 6 = 6 x R8,73 = R52,38 7 - 30 = 24 x R17,61 = R422,64 31 - 51 = 21 x R25,99 = R545,79 Total = R1 020,81 VAT = R142,91 Total with VAT = R1 163,72 Therefore will pay R1163,72 - R1 075,61 = R88,11 more permonth	9	1 mark: 6 x R8,73 1 mark: 24 x R17,61 1 mark: 31 x 1 mark: R25,99 1 mark: overall total 1 mark: VAT correct (CA) 1 mark: overall total 1 mark: method for excess correct 1 mark: answer (CA)	2	2	5		9				
	Question 1:	**32**										
2.1	3,6 m + 4 m + 6,5 m = 14,1 m	2	1 mark: values 1 mark: method	2					2			
2.2	AB = $\sqrt{(3,6)^2 + (2,7)^2}$ = $\sqrt{12,96 + 7,29}$ = 4,5 m	3	1 mark: values 1 mark: correct subst 1 mark: answer		3				3			
2.3	CD = 16 m - AB - BC = 16 m - 4,5 m - 4 m = 7,5 m	3	1 mark: method 1 mark: values 1 mark: answer	3					3			
2.4	Short length of triangle = $\sqrt{7.5^2 - 6,5^2}$ = 3,74 m Total = 3,74 + 2,7 m = 5,44 m	4	1 mark: Pythagorus 1 mark: values 1 mark: answer for short side 1 mark: add 2,7 m		4				4			
2.5	Area = π x Radius^2 = (3,142) x (1,5 m)^2 = 7,07 m^2	4	1 mark: convert to m 1 mark: formula 1 mark: radius 1 mark: answer		4				4			
2.6	Area of triangle = 1/2 x 3,6 m x 2,7 m = 4,86 m^2 Area of rectangle = 4 m x 2,7 m = 10,8 m^2 Area of trapezium = 1/2 (2,7 m + 5,44 m) x 6,5 m = 26,46 m^2 Total Area = 4,86 + 10,8 + 26,46 - 7,07 = 35,05 m^2	9	1 mark: area of triangle method 1 mark: values correct 1 mark: area of triangle 1 mark: area of rectangle 1 mark: method for trapezium (or split up) 1 mark: values (CA) 1 mark: area answer 1 mark: subtract fish pond 1 mark: total (CA)		5	4			9			
2.7.1	Total Area = 35,05 x 10 000 = 350 500 cm2 Total voluem = Area x height = 350 500 x 3 = 1 051 500 cm3	4	1 mark: conversion of area method 1 mark: area converted 1 mark: method for volume 1 mark: volume answer (CA)	2	2				4			
2.7.2	Total vol = 1 051,5 ℓ No. of bags = 1 051,5 ÷ 20 = 52,55 bags ≈ 53 bags	5	2 marks: convert litres to cm3 1 mark: divide by volume of bag 1 mark: raw answer 1 mark: round up answer	2	3				5			
	Question 2:	**34**										

3.1		2	1 mark: starting and ending points correct 1 mark: route sensible	2						2		
3.2	Starting at Richmond, drive down the R56 towards Ixopo. Keep on this road for quite a while until just past Rietvlei when you join the N2 for a bit. Turn right back onto the R56 and Kokstad will be ahead of you.	4	1 mark: starting at Richmond 1 mark: recognise R56 1 mark: directions towards Rietvlei or similar 1 mark: turn right to Kokstad		4					4		
3.3	**M R** 1,9 cm : 1 000 000 cm 1 : 526 316 ≈ 1 : 500 000	4	1 mark: measurement (18 mm to 20 mm) 1 mark: convert 10 km to same unit 1 mark: rough answer 1 mark: rounded answer		4					4		
3.4	M R 1,9 cm : 10 km 14,5 cm : 76,3 km ≈ 76 km	4	1 mark: measure (14 - 15 cm) 1 mark: method for conv (bar scale only!) 1 mark: rough answer 1 mark: rounded answer		4					4		
3.5	ℓ km 8 : 100 7 : 87,5 km Therefore enough to make it.	4	1 mark: method for conv 1 mark: convert (either l or km) 1 mark: compare to distance 1 mark: answer	2	2					4		
	Question 3:	**18**										
4.1	30 - 39	2	2 marks: answer	2							2	
4.2	% decr = (3 054 878 - 2 455 569) / 3 054 878 x 100% = 19,62%	4	1 mark: values 1 mark: difference 1 mark: divide by original value 1 mark: answer (to 2 dp)	3	1						4	
4.3	14 465 896 / 26 333 353 x 100% = 54,93%	3	1 mark: method 1 mark: values 1 mark: answers	3							3	
4.4	Three million one hundred and fifty three thousand four hundred and ninety	2	1 mark: correct value 1 mark: correct answer	2							2	
4.5	2,7 million	2	1 mark: 2,7 1 mark: million used correctly	2							2	
4.6.1	2 236 097 / 26 333 353 0,0849	3	1 mark: numerator 1 mark: denominator 1 mark: answer (to 4 dp)	3								3
4.6.2	(1 042 113 + 442 938 + 170 213) / 26 333 353 x 100% = 6,29%	4	1 mark: 1 042 113 1 mark: both other values in numerator 1 mark: denominator 1 mark: % correct (CA)	3	1							4
4.7.1	ANC. The graph had the steepest slope	2	1 mark: ANC 1 mark: Steepest slope	2							2	
4.7.2	Week 7. 6%	2	1 mark: Week 7 1 mark: 6% (accept 5 - 7 %	2							2	
4.7.3	(41,84 + 27,61 + 5,98 + 16,03) / 4 = 22,87%	3	1 mark: all values present 1 mark: divide by no of values present 1 mark: Answer (with % sign behind)	3							3	
4.7.4	41,84 + 27,61 + 5,98 + 16,03 = 91,46 This is not 100% and that is what it would have to be for all parties to be represented.	4	1 mark: total all values 1 mark: total 1 mark: show link to 100% 1 mark: recognise that 100% needed		4						4	
	Question 4:	**31**										
5.1		5	1 mark: graph title 1 mark: appropriate scale for horiz axis 1 mark: At least 2 points plotted correctly 1 mark: At least 6 points plotted correctly 1 mark: All points plotted correctly	5							5	
5.2.1	The women's involvement has increased over the time frame and is now 100%	2	1 mark: increased over the time frame 1 mark: another useful comment (e.g. now 100%)		2						2	
5.2.2	No. It has already reached 100% and cannot go beyond that.	2	1 mark: no 1 mark: maximum of 100%	2								2
5.3.1	(21 - 15) / 2 = 3	2	1 mark: method 1 mark: answer	2						2		
5.3.2	This is approx 48 mph. So it should be the first small line after the third large line.	2	1 mark: after 3rd large line 1 mark: first small line after	2						2		

5.4	record = 23,4 mph = 23,4 x 1,6 = 37,44 kph = 37,44 km ÷ 3 600 s = 0,0104 km / s **m s** 10,4 1 100 : **9,62s (Actually 9,58)**	6	1 mark: correct speed 1 mark: conv method for km 1 mark: correct km answer 1 mark: correct method for seconds 1 mark: correct seconds 1 mark: answer.	3	3				6			
5.5	6 000 000 ÷ 0,056 = R107 142 857,10 ≈ R107 142 857	3	1 mark: method 1 mark: answer 1 mark: rounded answer	3				3				
5.6.1	R12 000 x 1,13 x 1,13 x 1,13 = R17 314,76	4	1 mark: method for increase 1 mark: increase 1st year by 13% 1 mark: increase new total by 13% 1 mark: increase 2nd total by 13%		4			4				
5.6.2	(1 100 - 300) / 1 100 = 72,73%	3	1 mark: diff 1 mark: divide by 1100 1 mark: final answer (only if 1100 used)	3				3				
5.6.3	Ticket = 300 x 14,73 = R4 419 Total = R11 454 + R4 419 = R15 873 He has saved enough	4	1 mark: conversion method 1 mark: Rand amount correct 1 mark: total 1 mark: compare correctly	4				4				
5.6.4	Any two sensible things, e.g. accomodation, food, sightseeing, mementoes	2	1 mark(each): sensible answer	2				2				
	Question 5:	**35**										
	Total:	**150**	**Totals**	**81**	**60**	**9**	**0**	**48**	**40**	**22**	**31**	**9**
			% Breakdown	54	40	6	0	32	27	15	21	6
			Goals	***60***	***35***	***5***	***0***	***35***	***20***	***15***	***25***	***5***

L8:	**135**	to	**150**	*L4:*	**75**	to	**90**
L7:	**120**	to	**135**	*L3:*	**60**	to	**75**
L6:	**105**	to	**120**	*L2:*	**45**	to	**60**
L5:	**90**	to	**105**	*L1:*	**0**	to	**45**