basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P2

NOVEMBER 2012

FINAL MEMORANDUM

MARKS: 150

Symbol	Explanation
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/Reading from a graph
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
J	Justification

PLEASE NOTE:

1. If a candidate deletes a solution to a question without providing another solution, then the deleted solution must be marked.
2. If a candidate provides more than one solution to a question, then only the first solution must be marked and a line drawn through any other solutions to the question.

This memorandum consists of 19 pages.

QUESTION 1 [26 MARKS]			
Ques	**Solution**	**Explanation**	**AS**
1.1.1	South-westerly ✓✓ A (accept abreviations for compass directions)	2A correct direction 1A Southerly 1A Westerly (2)	12.3.4 L3
1.1.2	N5 **OR** N17 ✓✓ A	2A correct national road N17 accepted due to unclear provincial boundaries (2)	12.3.4 L3
1.1.3	**One possible route:** ✓ A From Bloemfontein turn onto the N1 and travel south until Beaufort West. Then turn onto the N12 until George. ✓ A **A second possible route:** ✓ A From Bloemfontein turn onto the N1 and travel south until the intersection with the N9. Then follow the N9 until George. ✓ A **A third possible route:** ✓ A From Bloemfontein turn onto the N1 and travel south until the intersection with N10. Then follow the N10 in a south easterly direction until the N2. Then follow the N2 in a westerly direction until George. ✓ A **A fourth possible route:** ✓ A From Bloemfontein turn onto the N1 and later turn onto the N6 to East London. Then follow the N2 in a westerly direction until George. ✓ A **A fifth possible route:** ✓ A From Bloemfontein turn north onto the N1, turn right unto N5, take a right unto N3 pass Pietermaritzburg to Durban. Then at Durban turn south unto the N2, pass East London, Port Elizabeth and continue until George. ✓ A **NOTE:** Follow the learners route. But leaners cannot go back to Kimberley (No N8 route).	1A N1 1A N12 and Beaufort West **OR** 1A N1 1A N9 **OR** 1A N1 1A N10, N2 **OR** 1A (N1) N6 and East London, 1A N2 **OR** 1A N1; N5 and 1A N3 Durban; N2 (4)	12.3.4 L2

Ques	Solution	Explanation	AS
1.2.1	Total amount for accommodation = R1 050 × 6 ✓A = R6 300 ✓CA **OR** (due to language interpretation) Total amount for accommodation = R1 050 × 7 ✓A = R7 350 ✓CA	1A rate × 6 1CA simplification Correct answer only– full marks (2)	12.1.3 L2
1.2.2 (a)	Total cost (in rand) = (60 × 4 × number of breakfasts) ✓M + (90 × 4 × number of lunches) ✓M + (120 × 4 × number of suppers) ✓M **OR** Total cost (in rand) = (60 × x ✓M + 90 × y ✓M + 120 × z) × 4 Where x = number of breakfasts y = number of lunches ✓M and z = number of suppers **OR** Total cost (in rand) = (number of days × n × 60) ✓M + (number of days × n × 90) + ✓M (number of days × n × 120) Where n = number of people ✓M **OR** Total cost (in rand) ✓M = (Sat + Sun + Mon + Tues + Wed + Thurs + Fri) cost = 120n + 270n + 180n + 210n + 270n + 150 n + 60n) = 1 260 n ✓M Where n = number of people ✓M	**Note:** Equation must have a variable 1M adding 1M multiplying cost 1M multiplying by 4 **or** number of people **OR** 1M adding 1M costs in terms of meals 1M variables explained **OR** 1M adding 1M costs in terms of meals 1M variable explained **OR** 1M adding 1M costs in terms of days 1M variable explained 270 × number of people/meals - (1 mark only) (3)	12.2.3 L3
1.2.2 (b)	Total cost (in rand) = (60 × 4 × 5) + (90 × 4 × 4) + (120 × 4 × 5) ✓S = 1 200 + 1 440 + 2 400 ✓CA = 5 040 ✓CA **OR**	**REFER TO CANDIDATE'S FORMULA** Correct answer only– full marks 1S correct substitution of number of people 1S correct substitution of number of meals 1CA simplification 1CA total	12.2.3 L3

Ques	Solution	Explanation	AS
	OR Total cost (in rand) $= (60 \times x + 90 \times y + 120 \times z) \times 4$ ✓S ✓S $= (60 \times 5 + 90 \times 4 + 120 \times 5) \times 4$ $= 1\,260 \times 4$ ✓CA $= 5\,040$ ✓CA **OR** **(using equation from** 1.2.2 (a) working with daily cost) Total cost (in rand) = 1 260 × 4 ✓S ✓S = 5 040 ✓CA ✓CA **OR** (calculating total daily costs) Cost of meals: Saturday = R120 × 4 = R480 Sunday = (R60 + R90 + R120) × 4 = R1 080 Monday = (R60 + R120) × 4 = R720 ✓S Tuesday = (R90 + R120) × 4 = R840 Wednesday = (R60 + R90 + R120) × 4 = R1 080 Thursday = (R60 + R90) × 4 = R600 ✓S Friday = R60 × 4 = R240 Total cost (in rand) = 480 +1 080 +720 +840 + 1 080 + 600 + 240 ✓CA = 5 040 ✓CA **OR (calculating total cost of types of meals)** Total cost of breakfast = R60 × 5 × 4 = R1 200 ✓S Total cost of lunches = R90 × 4 × 4 = R1 440 ✓S Total cost of suppers = R120 × 5 × 4 = R2 400 Total cost (in rand) = 1 200 + 1 440 + 2 400 ✓CA = 5 040 ✓CA	1S correct subst. no. of people 1S correct subst. no. of meals 1CA simplification 1CA total 2S substitution of no. of people 2CA total 2S correct subst. daily cost 1CA simplification 1CA total 2S correct subst. meal cost 1CA simplification 1CA total (4)	

Ques	Solution	Explanation	AS
1.2.3	Cost for nature walk = (R120 × 2) +(R100 ×2) ✓M/A = R440 ✓CA Cost for game park = R200 × 4 = R800 ✓A Cost for boat cruise = (R200 × 2) + (R150 × 2) ✓M/A = R700 ✓CA Total entertainment cost = R440 + R800 + R700 + R2 000 = R3 940 ✓CA **Six day option:** Total cost for the trip (accom. + meals + long dist. + local + ent) ✓M/A =R6 300 + R5 040 + R1 602,86 + R513,60 + R3 940 = R17 396,46 ✓CA **OR** **Seven day option:** Total cost for the trip (accom. + meals + long dist. + local + ent) ✓M/A =R7 350 + R5 040 + R1 602,86 + R513,60 + R3 940 = R18 446,46 ✓CA ∴ Mr Nel's estimate was **CORRECT** ✓J	1M/A expression for cost 1CA simplification 1A cost for game park 1M/A expression for cost 1CA simplification 1CA total cost 1M/A adding all costs 1CA total cost 1M/A adding all costs 1CA total cost 1J verification (9)	12.1.3 L4
			[26]

QUESTION 2 [34 MARKS]

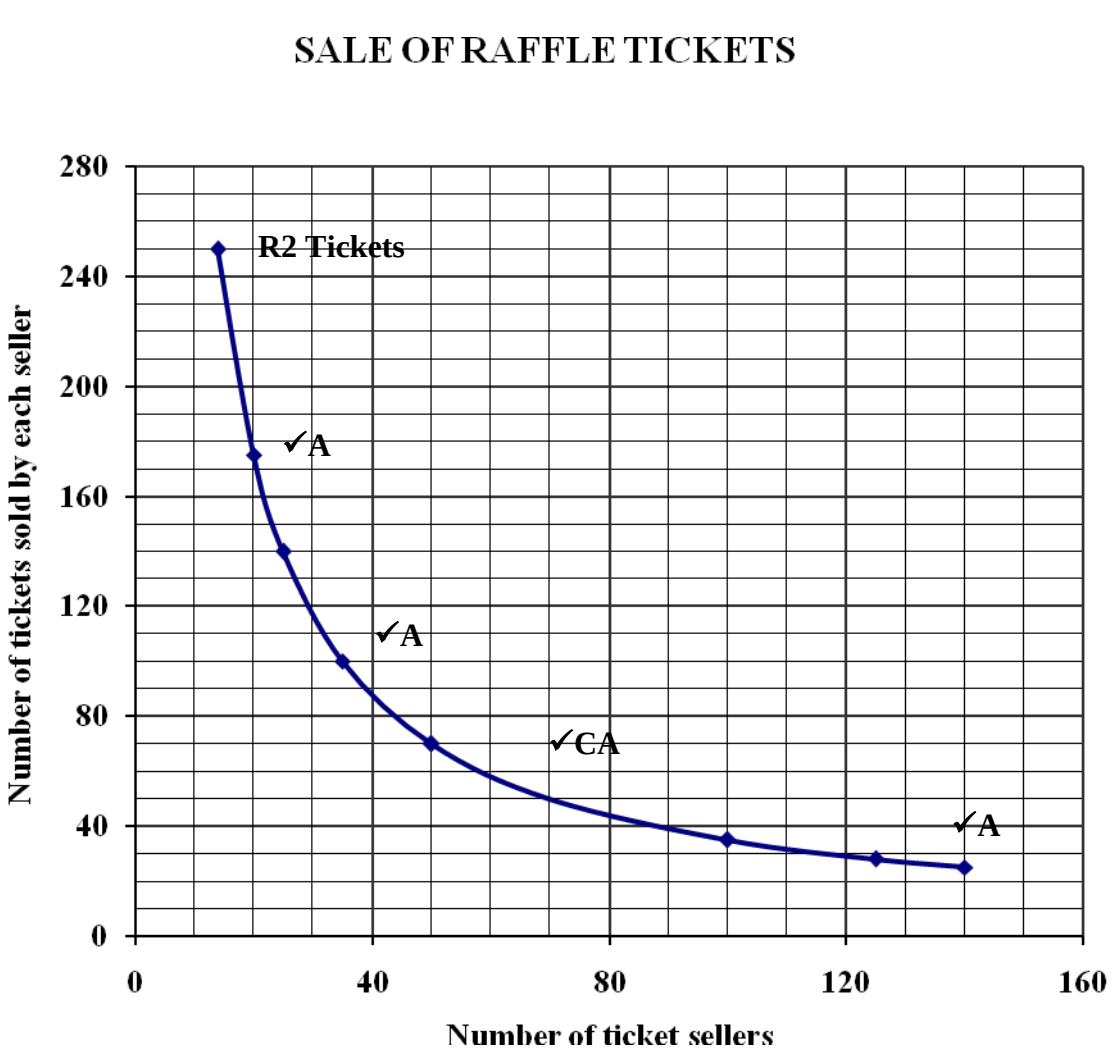
Ques	Solution	Explanation	AS
2.1.1(a)	A – 15 = 37 ✓M A = 52 ✓A **OR** A = 37 + 15 ✓M = 52 ✓A	1M concept of range 1A simplification Correct answer only– full marks (2)	12.4.3 L3
2.1.1(b)	The mean for 16 customers is 34 minutes ∴ total waiting time = 16 × 34 = 544 ✓M Total of known waiting times = 30 + 15 + 45 + 36 + (52) + 40 + 34 + 42 + 26 + 32 + 38 + 35 + 41 + 28 = 494 ✓M Difference is 544 – 494 = 50 ✓S ∴ 2 customers have a total waiting time of 50 minutes ∴ B = $\frac{50}{2}$ = 25 ✓CA **OR** Mean ✓M = $\frac{30+15+45+36+52+40+34+B+B+42+26+32+38+35+41+28}{16}$ ✓M = 34 $\frac{494+2B}{16}$ = 34 2B = (34 × 16) – 494 ✓S = 50 ∴ B = 25 ✓CA **OR** B = $\frac{(34\times16)-494}{2}$ ✓S = 25 ✓CA	**Refer to value of A in 2.1.1(a)** 1M total waiting time 1M total of known times 1S difference of the totals 1CA value of B **OR** 1M adding all the values 1M dividing by 16 1S simplification 1CA value of B Correct answer only - full marks (4)	12.4.3 L3
2.1.1 (c)	Waiting times are: ✓M/A 15; (25); (25); 26; 28; 30; 32; 34; 35; 36; 38; 40; 41; 42; 45; (52) Median = $\frac{34+35}{2}$ ✓M = 34,5 ✓CA	(Using A and B values calculated above) 1M/A arranging 16 terms in ascending order 1M median concept (even number of terms) 1CA simplification (3)	12.4.3 L3

Ques	Solution	Explanation	AS
2.1.2	4 ✓✓CA	2CA correct number Note if B is greater than 27 answer can be 2 (2)	
2.1.3	The mean, median and range for 7 February are less than those for 14 February. ✓O This means that his customers had to wait for a shorter time on 7 February than on 14 February. ✓O **Any two of the reasons below:** • It could be that more people came to eat at his eating place on 14 February, because of Valentine's Day. ✓J • He had less staff on the 14th, ✓J • He had the same number of staff but did not anticipate the increased number of customers. ✓J • His equipment was faulty on the 14th – people had to wait longer to be served ✓J • The electicity was off for a while ✓J **OR** The mean, median and range for 14 February are more than those for 7 February. ✓O This means that his customers had to wait for a longer time on 14 February than on 7 February. ✓O **Any two of the reasons below:** • It could be that less people came to eat at his eating place on 7 February, because of Valentine's Day. ✓J • He had more staff on the 7th, ✓J • He had the same number of staff but did not anticipate the difference in number of customers.✓J • His equipment was working well on the 7th – people did not wait long to be served ✓J • No electicity problems on the 7th ✓J **OR** Any other valid, well thought out reason will be accepted	2O comparing the measures Accept a comparison table of correct values 2J conclusion (4)	12.4.4 L4

Ques	Solution	Explanation	AS
2.2.1	Percentage ordering chicken = 15% ✓A If 20% of the total = 40 ∴ 1% of the total = $\frac{40}{20}$ = 2 ✓M ∴ 15% of the total = 15 × 2 ✓A = 30 ✓CA **OR** ✓M 20% : 40 = 15% : x ✓A $x = \frac{15\%}{20\%} \times 40$ ✓S = 30 ✓CA **OR** 20% of total = 40 Total = $\frac{40}{20\%}$ ✓M = 200 ✓A ✓A ∴ 15% of 200 = 30 ✓CA	1A percentage ordering chicken 1M finding 1% 1A multiplying by 15 1CA simplification **OR** 1M using proportion 1A percentage ordering chicken 1S expression for x 1CA simplification **OR** 1M finding total no. of customers 1A total number of customers 1A percentage ordering chicken 1CA simplification Correct answer only– full marks (4)	12.1.1 (2) 12.4.4 (2) L2 (2) L3 (2)
2.2.2	P(not lamb) = 1 – 25% = 75% ✓M ✓A **OR** 0,75 **OR** $\frac{3}{4}$ **OR** Percentage not ordering lamb = 10 + 15 + 20 + 30 = 75 ✓M P(not lamb) = 75% ✓A **OR** 0,75 **OR** $\frac{3}{4}$ **OR** Number of people not ordering lamb = 20 + 30 + 40 + 60 = 150 ✓M P(not lamb) = $\frac{150}{200}$ = $\frac{3}{4}$ **OR** 0,75 **OR** 75% ✓A	1M subtracting from100 % 1A simplification 1M adding percentages 1A simplification 1M adding actual numbers 1A simplification Correct answer only - Full marks (2)	

Ques	Solution	Explanation	AS
2.3.1	Two of the following possible reasons: • To protect the base of the drum from burning. • To bring the fire closer to the grid. • To spread the coals evenly. (Perfect the braaing) • To use less coal. • To stabilise the drum. • To retain the heat of the burning coals. • The sand can be used to put out the fire. Accept any **two** valid reasons. ✓✓O ✓✓O	2O reason 2O reason (4)	
2.3.2	Volume of the braai drum = 108 ℓ $= 108 \times 1\,000\,000\ mm^3$ $= 108\,000\,000\ mm^3$ ✓C Radius of the braai drum = $\frac{572\ mm}{2}$ = 286 mm✓A ✓M Volume of the braai drum = $\frac{1}{2} \times \pi \times (\text{radius})^2 \times (\text{height})$ ✓SF $108\,000\,000\ mm^3 = \frac{1}{2} \times 3{,}14 \times (286\ mm)^2 \times (\text{height})$ Height = $\frac{2 \times 108\,000\,000\ mm^3}{3{,}14 \times (286\ mm)^2}$ ✓M = 840,99 mm✓CA (840,56... mm using π) ≈ 841 mm But length of grid = 1% more than height of drum 1% of 840,99 mm = 8,4099 ✓M ∴ Length of grid = 840,99 mm ✓M + 8,4099 = ✓CA 849,41 mm **OR** ✓M ✓M ∴ Length of grid = 101% of 840,99 mm = 849,40 mm✓CA	1C volume in mm^3 1A value of radius 1M using $\frac{1}{2}$ cylinder 1SF substitution into formula 1M Finding expression for height 1CA for height only 1M calculation percentage 1M increasing by 1% 1CA length of grid **OR** 1M increasing by 1% 1M calculation percentage 1CA length of grid **No penalty if answer is rounded to 850 mm** (9)	12.3.1 L4
			[34]

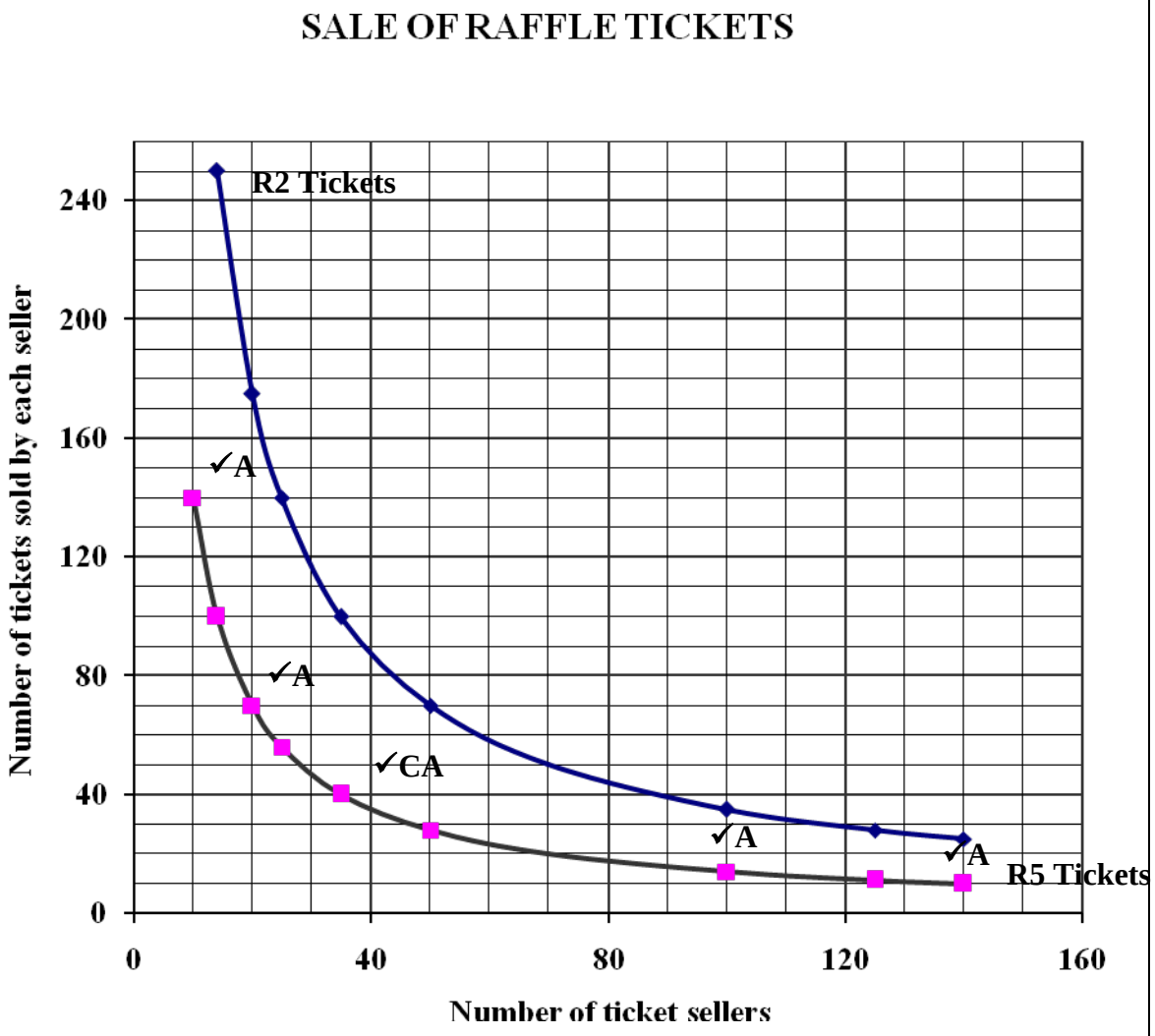
QUESTION 3 [26 MARKS]			
Ques	**Solution**	**Explanation**	**AS**
3.1.1	Number of R2,00 tickets per seller $= \frac{3500}{\text{number of sellers}}$ ✓A ✓A **OR** Number of R2,00 ticket per seller $= \frac{7\,000}{2 \times \text{number of sellers}}$ ✓A ✓A **OR** Number of R2,00 tickets per seller $= \frac{7\,000}{2n} = \frac{3500}{n}$ where n = number of sellers	1A using 3 500 1A dividing by number of sellers **OR** 1A using 7 000 ÷ 2 1A dividing by number of sellers (2)	12.2.1 L3
3.1.2 (a)	Indirect/Inverse proportion ✓A	1A correct type of proportion two answers zero marks (1)	12.1.1 L2
3.1.2 (b)	$P = \frac{3500}{250}$ ✓A ✓A **OR** P : 70 = 50 : 250 ✓A = 14 ✓CA = 50 × $\frac{70}{250}$ ✓CA ✓M = 14 $Q = \frac{3500}{125}$ = 28 ✓CA	1A finding the number of tickets 1M dividing by 250 1CA correct value of P 1CA correct value of Q Correct answer only - Full marks (4)	12.2.1 L2

3.1.2 (c)	 1A correct plotting of point (20;175) 1A correct plotting of point (140;25) 1A one other point plotted correctly 1CA joining the plotted points by a "smooth" curve (section from 20 ticket sellers to 100 ticket sellers) (4)		12.2.2 L2
3.2.1	Fewer tickets have to be sold. ✓✓ J **OR** To reduce the number of sellers. ✓✓ J **OR** To raise the money faster (in a shorter time) ✓✓ J **OR** To raise more money/to buy more computers ✓✓ J	2J reason for decision (2)	12.1.2 (1) 12.2.3 (1) L4
3.2.2	Fewer people can afford (too expensive) to buy the R5,00 tickets. **OR** Some of the sellers might not be able to sell all their tickets	2J disadvantage (2)	12.1.2 (1) 12.2.3 (1) L4

Ques	Solution	Explanation	AS
3.2.3	Number of tickets to be sold = $\frac{R7\,000,00}{R5}$ ✓M = 1 400 ✓A Number of tickets per person = $\frac{1400}{\text{number of sellers}}$ ✓CA	1M dividing by R5 1A number of tickets to be sold 1CA formula **OR** Showing values in a table/co-ordinates - 3 marks	12.2.1 (3) 12.2.2 (5) L3 (4) L4 (4)

The possible points learners can use: (other point values can be used)

10	20	35	50	100	140
140	70	40	28	14	10



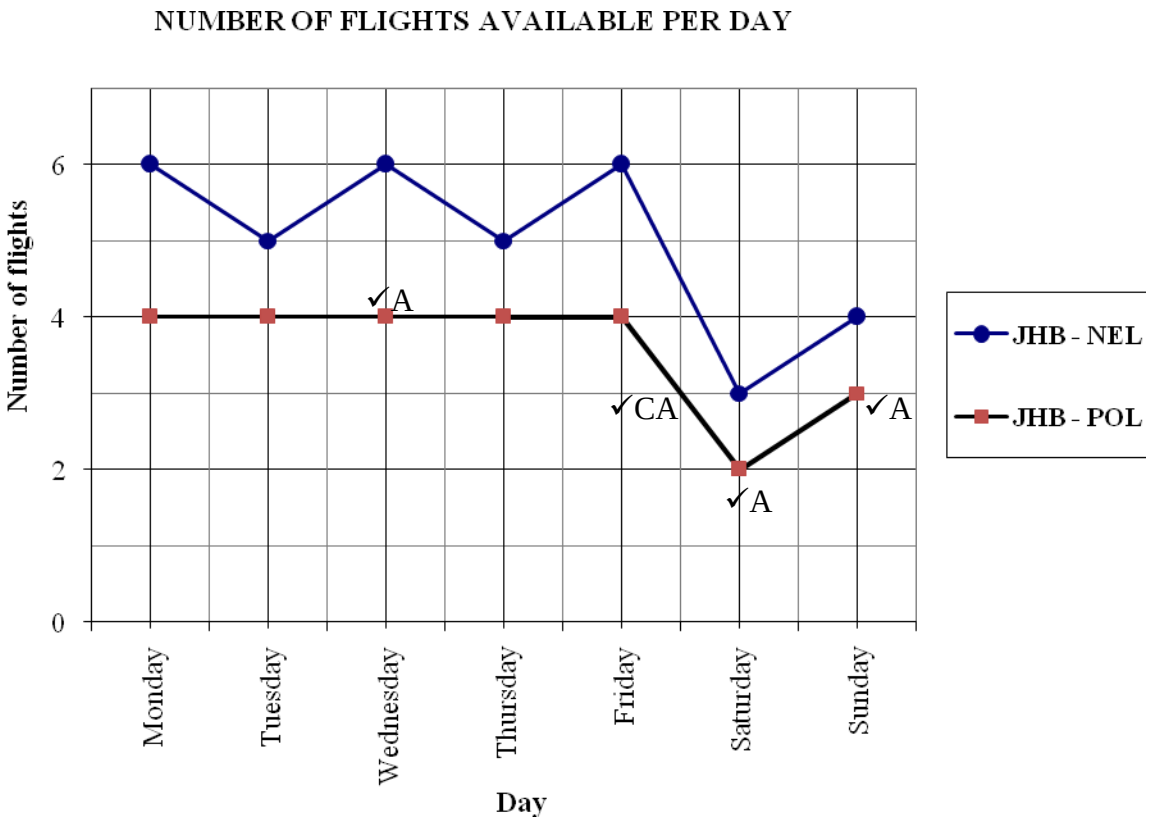
4CA any 4 points plotted correctly
1CA joining the plotted points by a smooth curve

(8)

Ques	Solution	Explanation	AS
3.2.4	At R2 per ticket 50 tickets must be sold ✓RG At R5 per ticket 20 tickets must be sold ✓RG Difference = 50 – 20 = 30 tickets ✓CA **OR** Number of R2,00 tickets per person = $\frac{3500}{70}$ = 50 ✓M Number of R5,00 tickets per person = $\frac{1400}{70}$ ✓M = 20 Difference = 50 – 20 tickets = 30 tickets ✓CA	1RG reading from graph 1RG reading from graph 1 CA difference in number of tickets **OR** 1M calculating the number of R2,00 tickets 1M calculating the number of R5,00 tickets 1CA difference in number of tickets **Answer only – Full marks** Accept values from 29 to 32. (refer to candidate's graph) (3)	12.1.1 (1) 12.2.3 (2) L3
			[**26**]

QUESTION 4 [27 MARKS]			
Ques	**Solution**	**Explanation**	**AS**
4.1.1	Avro ✓A It is the only one that can take MORE than 37 passengers (himself plus 37 others) ✓✓J	1A correct aircraft 2J justification (3)	12.4.4 L4
4.1.2	Scale is 9,9 cm to 19,25 m ✓M ✓C or 9,9 cm to 1 925 cm **OR** 0,099 m : 19,25 m Scale = $1 : \frac{1925}{9,9}$ ✓CA **OR** $1 : \frac{19,25}{0,099}$ ✓CA = 1 : 194,44 = 1 : 190 ✓CA	1M scale concept 1C converting to the same unit 1CA dividing to bring to a unit ratio 1CA rounding off Reversed ratio maximum 2 marks No conversion maximum 2 marks Correct answer only- full marks (4)	12.3.2 (1) 12.3.3 (3) L3
4.1.3	Maximum Operating Altitude = 25 000 feet ✓RT $= \frac{25\ 000}{6\ 076}$ nautical miles ✓M = 4,1145… nautical miles ≈ 4 nautical miles ✓CA	1RT reading from the table 1M dividing by 6076 ft 1CA nearest nautical mile (3)	12.3.2 L3
4.1.4	Distance = average cruising speed × time 510 km = average cruising speed × 39 minutes ✓SF Average cruising speed = $\frac{510\,\text{km}}{39\,\text{minutes}}$ = $\frac{510\,\text{km}}{0,65\,\text{h}}$ ✓C = 784,62 km/h ✓CA Ms Bobe was travelling in the **SUKHOI** ✓J **OR** Distance (Jetstream) = $(500 \times \frac{39}{60})$km = 325 km ✓C ✓SF Distance (Sukhoi) = $(800 \times \frac{39}{60})$km = 520 km ✓CA Distance (Avro) = $(780 \times \frac{39}{60})$km = 507 km ✓J Ms Bobe was travelling in the **SUKHOI**	1SF substitution 1C converting to hours 1CA average speed 1J identification of Aircraft **OR** 1SF substitution 1C converting to hours 1CA distance travel 1J identification of Aircraft	12.2.1 L3 (2) L4 (2)

Ques	Solution	AS	Ques
4.1.4 cont	**OR** Comparing time Time = $\frac{\text{distance}}{\text{speed}}$ Time (Jetstream) = $\frac{510}{500}$ h = 1,02 hours = 61,2 minutes ✓SF ✓CA ✓C Time (Sukhoi) = $\frac{510}{800}$ h = 0,6375 hours = 38,25 minutes Time (Avro) = $\frac{510}{780}$ h = 0,6538... hours = 39,23 minutes Ms Bobe was travelling in the **SUKHOI** ✓J	1SF substitution 1CA time taken 1C converting to minutes 1J identification of Aircraft (4)	
4.1.5	Fuel capacity (in litres) = $\frac{\text{fuel capacity (in kg)}}{820\,\text{g}}$ = $\frac{9362\ \text{kg}}{820\ \text{g}}$ ✓SF = $\frac{9362000\,\text{g}}{820\,\text{g}}$ ✓C = 11 417,07317 ≈ 11 417 ✓CA **OR** Fuel capacity (in litres) = $\frac{\text{fuel capacity (in kg)}}{820\,\text{g}}$ = $\frac{9362\ \text{kg}}{820\ \text{g}}$ ✓SF = $\frac{9362\ \text{kg}}{0{,}820\,\text{kg}}$ ✓C = 11 417,07317 ≈ 11 417 ✓CA	1SF substitution 1C converting to grams 1CA nearest litre 1SF substitution 1C converting to kilograms 1CA nearest litre No conversion - maximum 2 marks (3)	12.3.2 L2 (2) L3 (1)
4.2.1	Johannesburg to Polokwane: SA 8809 ✓✓A Polokwane to Johannesburg: SA 8816 ✓A	2A correct flight number 1A correct flight number (3)	12.4.4 L3

Ques	Solution		AS
4.2.2(a)	 1A drawing the horizontal line at 4 1A plotting (Saturday; 2) 1A plotting (Sunday; 3) 1CA joining the plotted points (4)		12.4.2 L3
4.2.2 (b)	Saturday ✓A Not many people travel on Saturday, as most business meetings are scheduled during the week. ✓✓O **OR** If people go away for the weekend on holiday, they travel there on a Friday and travel back on Sunday. ✓✓O **OR** Possible religious reason ✓✓O **OR** Any other valid reason ✓✓O	1A correct day 2O own opinion based on candidates graph (3)	12.4.4 L4
			[27]

QUESTION 5 [37 MARKS]			
Ques	**Solution**	**Explanation**	**AS**
5.1.1	For 30 items: Cost = R5 000 ✓RG Income = R3 600 ✓RG Loss = R5 000 – R3 600 = R1 400 ∴ 30 items ✓A	1RG cost 1RG income 1A number of items Correct answer only - full marks (3)	12.2.2 L3
5.1.2	Cost of 40 items = R5 500 ✓RG **OR** 40 × R50,00 + R3 500 Income from 40 items = R137,50 × 40 ✓M = R5 500 ✓A At 40 items, Cost = Income ∴ Mr Stanford's statement is **CORRECT**. ✓CA	1RG/A cost Or Cost = income 1M finding total income 1Asimplification 1CA verification (4)	12.2.2 L4
5.2.1	**N** is the total sales. 16 % of **N** = 800 ✓M $\mathbf{N} = 800 \times \frac{100}{16}$ ✓M = 5 000 ✓A **OR** 16% of the sales = 800 1% of the sales = $\frac{800}{16}$ ✓M ∴ 100 % of the sales = $\frac{800}{16} \times 100$ ✓M ∴ **N** = 5 000 ✓A **OR** 21 % of total sales = 1 050 ✓M Total sales = 1 050 × $\frac{100}{21}$ ✓M ∴ **N** = 5 000 ✓A **K** = $\frac{750}{5\,000} \times 100$ ✓M = 15 ✓CA	1M concept 1M finding an expression for N 1A total sales **OR** 1M finding unit value 1M finding 100% 1A total sales **OR** 1M concept 1M finding an expression for N 1A total sales 1M concept 1CA simplification	12.1.1 L2 (4) L3 (3)

Ques	Solution	Explanation	AS
	L = 17% of total sales **L** = $\frac{17}{100} \times 5\,000$ ✓M = 850 ✓CA **OR** 16% of the total is 800 1% of the total is $\frac{800}{16}$ $\therefore$ 17% of the total is $\frac{800}{16} \times 17$ ✓M $\therefore$ **L** = 850 ✓CA **Please note** If L is found first: ✓M ✓CA N = 350 + 750 + 1 050 + 850 + 800 + 900 + 200 + 100 = 5 000 ✓CA	1M finding 17 % 1CA simplification **OR** 1M finding unit value 1CA simplification **Correct answer only full marks** The values need not be a calculated in the same order as on the memo (7)	
5.2.2	Vivesh's % **(value of M)** = $\frac{900\,000}{5\,000\,000} \times 100\%$ ✓M **OR** $\frac{900}{5000} \times 100\%$ ✓M = 18% ✓CA = 18% ✓CA **OR** 100% – (7 + 15+ 21 + 17 + 4 + 2 + 16)% ✓M = 18% ✓CA Vivesh's bonus = 18% of R300 000 ✓M = R54 000 ✓CA $\therefore$ The objection is **NOT VALID**. ✓CA	1M expression for % 1CA simplification 1M calculating percentage 1CA simplification 1CA conclusion (5)	12.1.1 L4
5.2.3 (a)	R50 000 ✓✓A	2A correct basic bonus (2)	12.1.1 L3

Ques	Solution	Explanation	AS
5.2.3 (b)	Total bonus amount =6,5 % × R5 500 000 = R357 500 ✓A Sales up to and including 10% : 3 persons Sales of more than 10% up to and including 20% : 4 persons Sales of more than 20% : 1 person Bonus amount remaining ✓M ✓M = R357 500 – (3 × R10 000 + 4 × R50 000 + R100 000) = R357 500 – R330 000 = R27 500 ✓CA Amount each will receive = $\frac{R27\,500}{8}$ ✓M = R3 437,50 ✓CA Mabel's total bonus = R100 000 + R3 437,50 = R103 437,50 ✓CA ∴ Mabel's bonus is **NOT MORE THAN** than R104 000. ✓O	1A total bonus 1 M finding the total basic bonus 1M finding the difference 1CA simplification 1M dividing by 8 1CA simplification 1CA Mabel's bonus (must include R100 000) 1O verification (8)	12.1.1 L4
5.3.1	Vivesh's sales in 2012 was more than double his sales in 2011. Vivesh was the top salesperson in 2012. ✓O✓O **OR** There is an increase in percentage sales from 12% to 28% **OR** Any other numerical comparison	2O interpretation (2)	12.4.6 L4
5.3.2	He read Mabel's and Henry's combined sales of 2011 and 2012 as the sales for 2012.✓✓O Henry's sales for 2012 were only 25%, Mabel's sales were 21% and the person with the highest sales was Vivesh with 28% ✓J ✓J	2O errors 1J Henry & Mabel 1J mention Vivesh as highest (4)	12.4.6 L4
5.3.3	Any **TWO** of the following: • Different type of Bar graphs ✓O • Line graphs ✓O • Pie charts	1O bar graphs 1O line graphs **OR** 1O pie charts (2)	12.4.6 L2
			[37]

TOTAL: 150