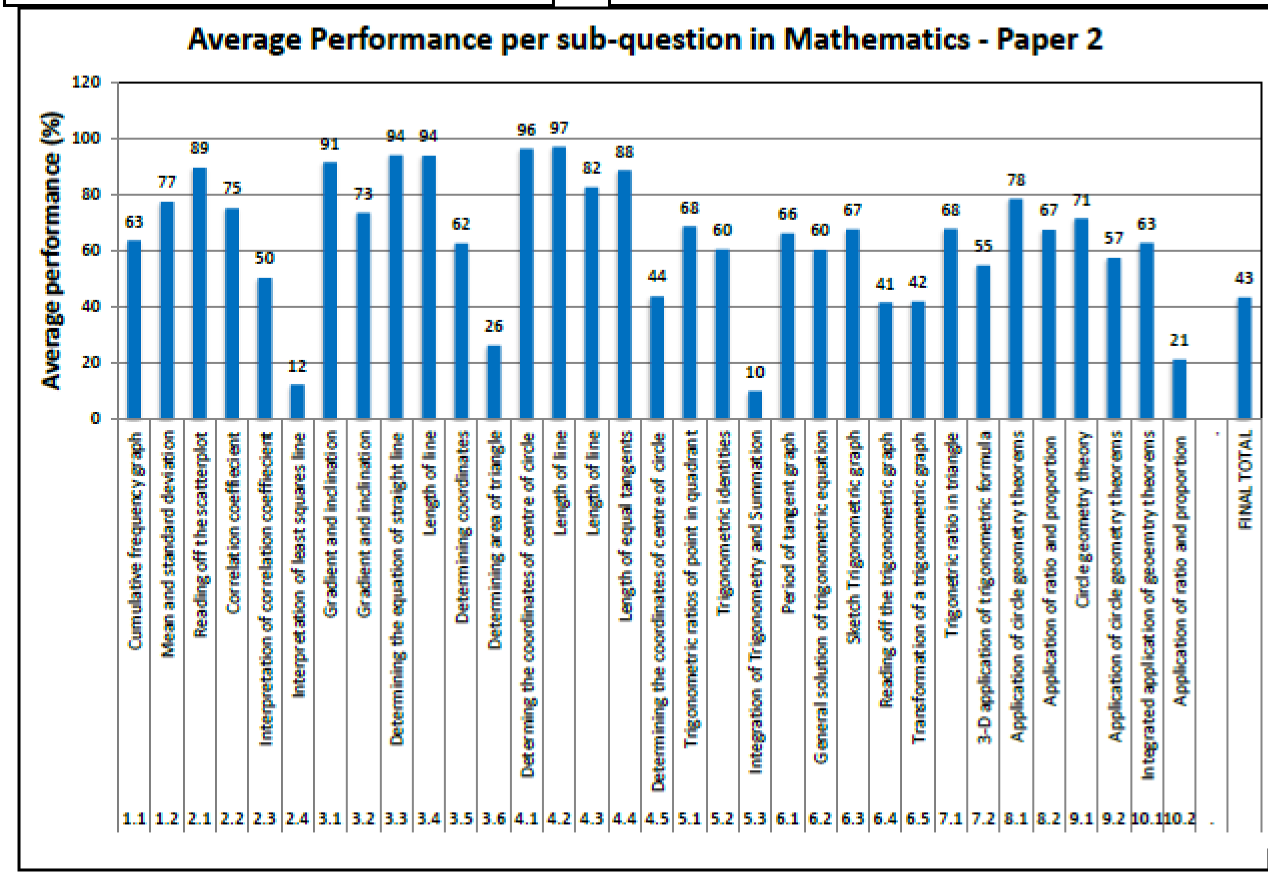
EXAMINATIONS AND ASSESSMENT CHIEF DIRECTORATE
Home of Examinations and Assessment, Zone 6, Zwelitsha, 5600
REPUBLIC OF SOUTH AFRICA, Website: www.ecdoe.gov.za

2018 NSC CHIEF MARKER'S REPORT

SECTION 1: (General overview of Learner Performance in the question paper as a whole)

SUBJECT		**MATHEMATICS**
PAPER		2
DURATION OF PAPER :		**3 HOURS**
PROVINCE		**EASTERN CAPE**
DATES OF MARKING		**30 NOVEMBER 2018 – 14 DECEMBER 2018**

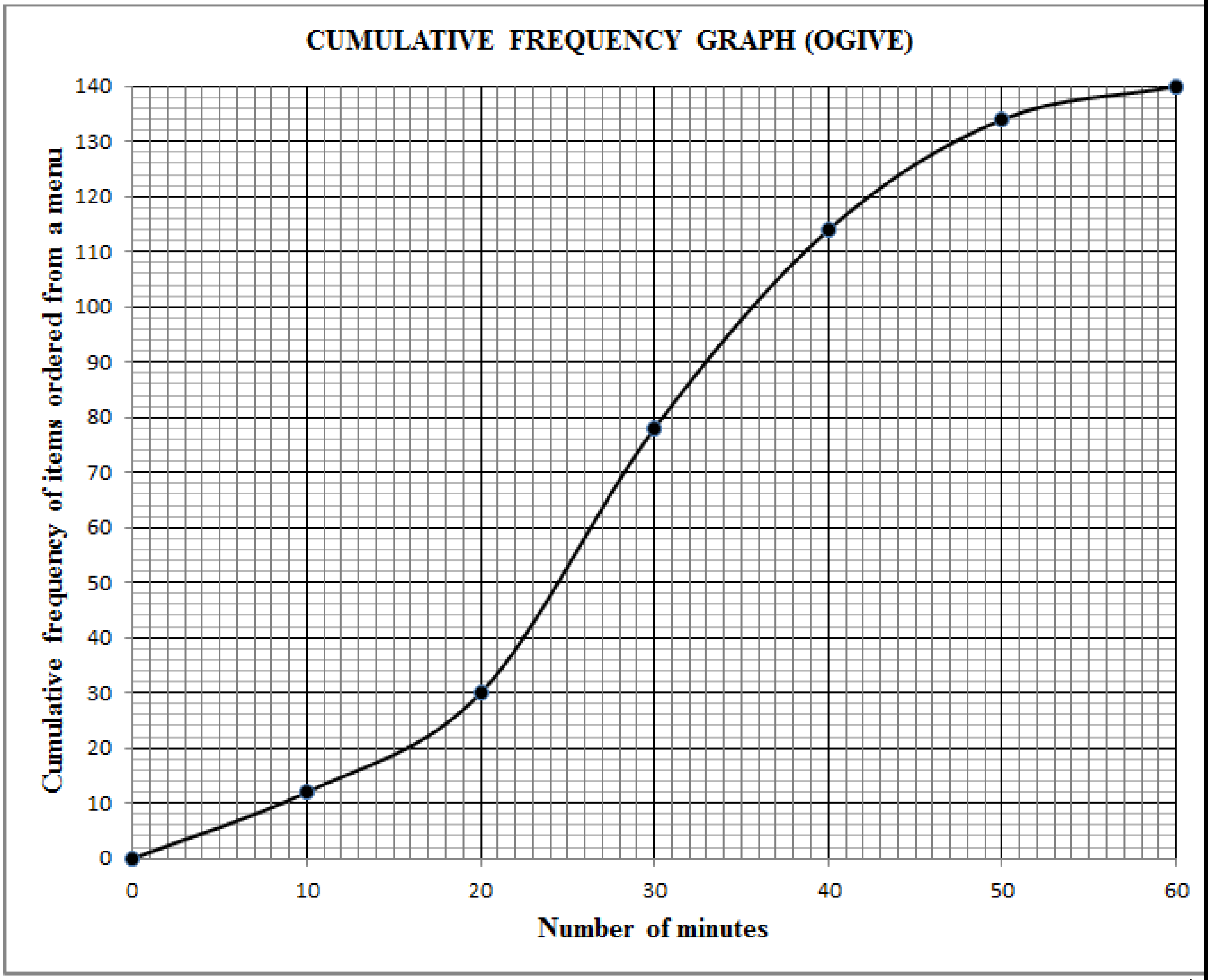


SECTION 2: Comment on candidates' performance in individual questions
(It is expected that a comment will be provided for each question on a separate sheet).

QUESTION 1
This question tested measures of central tendency and dispersion including the cumulative frequency graph

QUESTION 1

1.1 The cumulative frequency graph (ogive) drawn below shows the total number of food items ordered from a menu over a period of 1 hour.



1.1.1 Write down the total number of food items ordered from the menu during this hour. (1)

1.1.2 Write down the modal class of the data. (1)

1.1.3 How long did it take to order the first 30 food items? (1)

1.1.4 How many food items were ordered in the last 15 minutes? (2)

1.1.5 Determine the 75th percentile for the data. (2)

1.1.6 Calculate the interquartile range of the data. (2)

1.2 Reggie works part-time as a waiter at a local restaurant. The amount of money (in rands) he made in tips over a 15-day period is given below.

35	70	75	80	80
90	100	100	105	105
110	110	115	120	125

1.2.1 Calculate:

(a) The mean of the data (2)

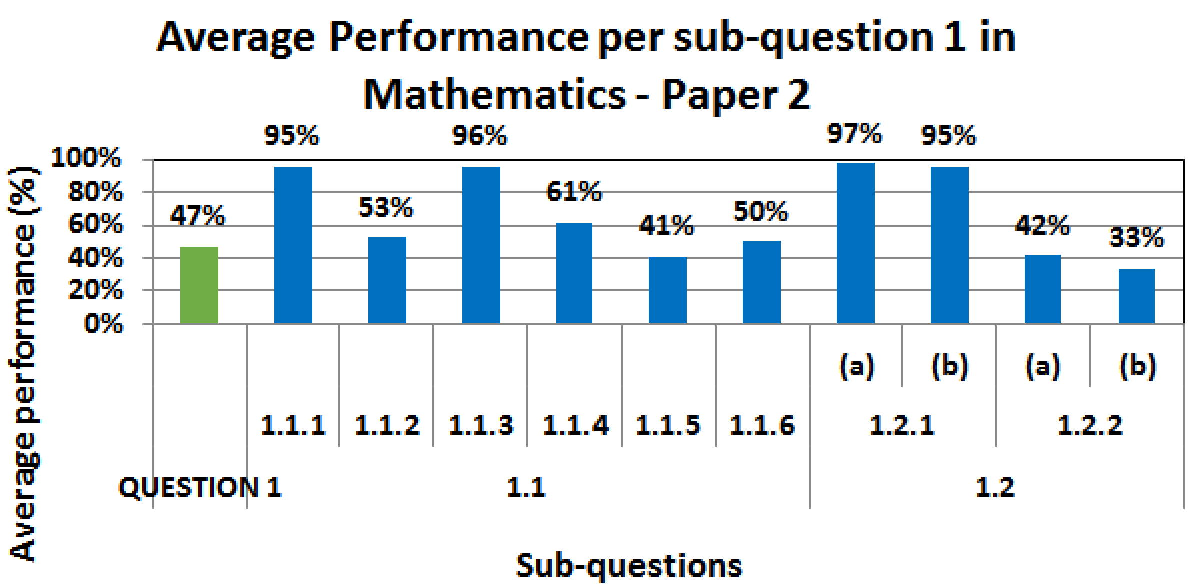
(b) The standard deviation of the data (2)

1.2.2 Mary also works part-time as a waitress at the same restaurant. Over the same 15-day period Mary collected the same mean amount in tips as Reggie, but her standard deviation was R14.

Using the available information, comment on the:

(a) Total amount in tips that they EACH collected over the 15-day period (1)

(b) Variation that EACH of them received in daily tips over this period (1)
[15]



(a)	General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was poorly answered.	

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
Language and context was a barrier based on the following
1.1.2 Candidates cannot interpret modal class from the graph
1.1.6. Candidates used Max –Min instead of $Q_3 - Q_1$
1.2.2 (a) candidates did not comment on the total amount in tips , they only mentioned R1420
1.2.2 (b) Candidates found it difficult to comment on the variation

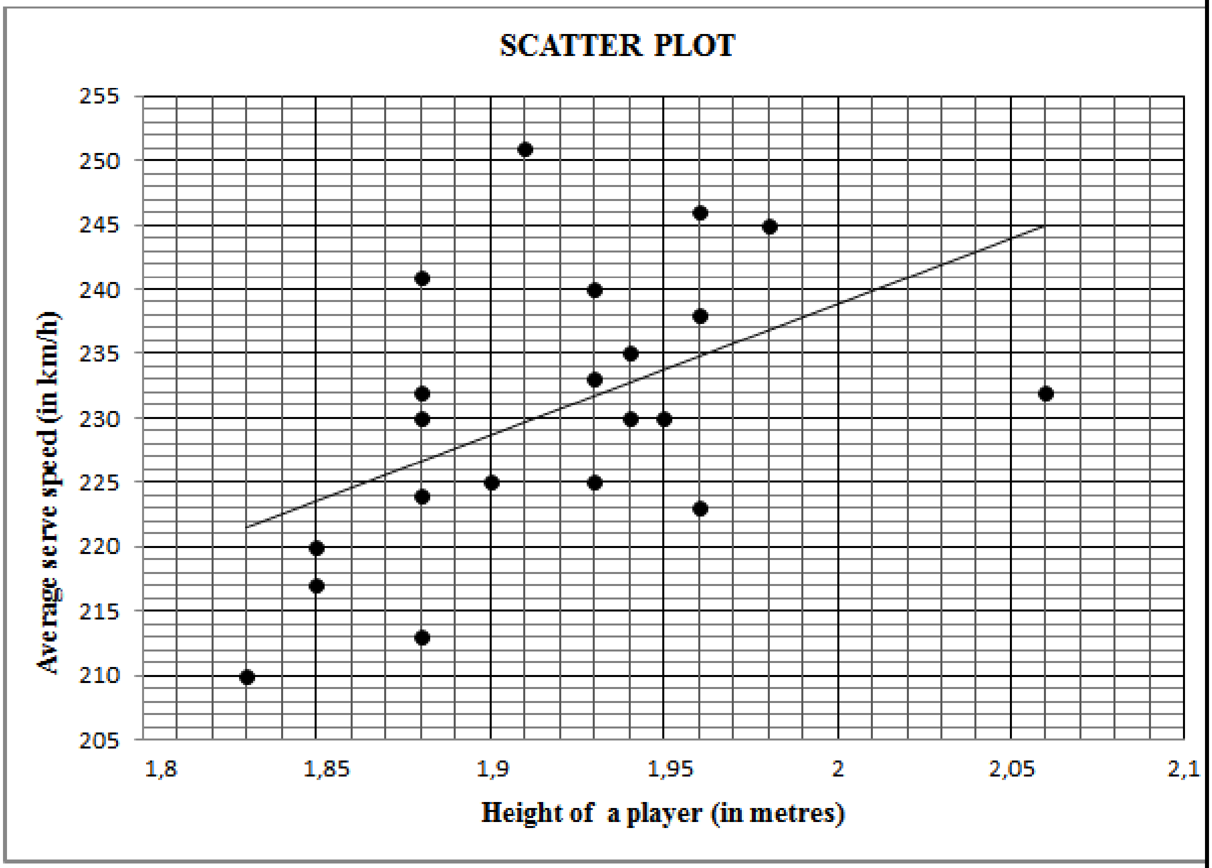
(c) Provide suggestions for improvement in relation to Teaching and Learning
Educators must focus more on the interpretation in statistics.
They must always relate the percentile and the quartile from grade 10 to grade 12.
Expose learners more on statistics Analysis and interpretation of graphs must be dealt with in
detail.

(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Statistics must be included in teacher development workshops.

QUESTION 2
This question tested correlation coefficient, interpretation of correlation coefficient and the interpretation of least squares regression line.

QUESTION 2

A familiar question among professional tennis players is whether the speed of a tennis serve (in km/h) depends on the height of a player (in metres). The heights of 21 tennis players and the average speed of their serves were recorded during a tournament. The data is represented in the scatter plot below. The least squares regression line is also drawn.



2.1	Write down the fastest average serve speed (in km/h) achieved in this tournament.	(1)
2.2	Consider the following correlation coefficients:	

A. $r = 0{,}93$ B. $r = -0{,}42$ C. $r = 0{,}52$

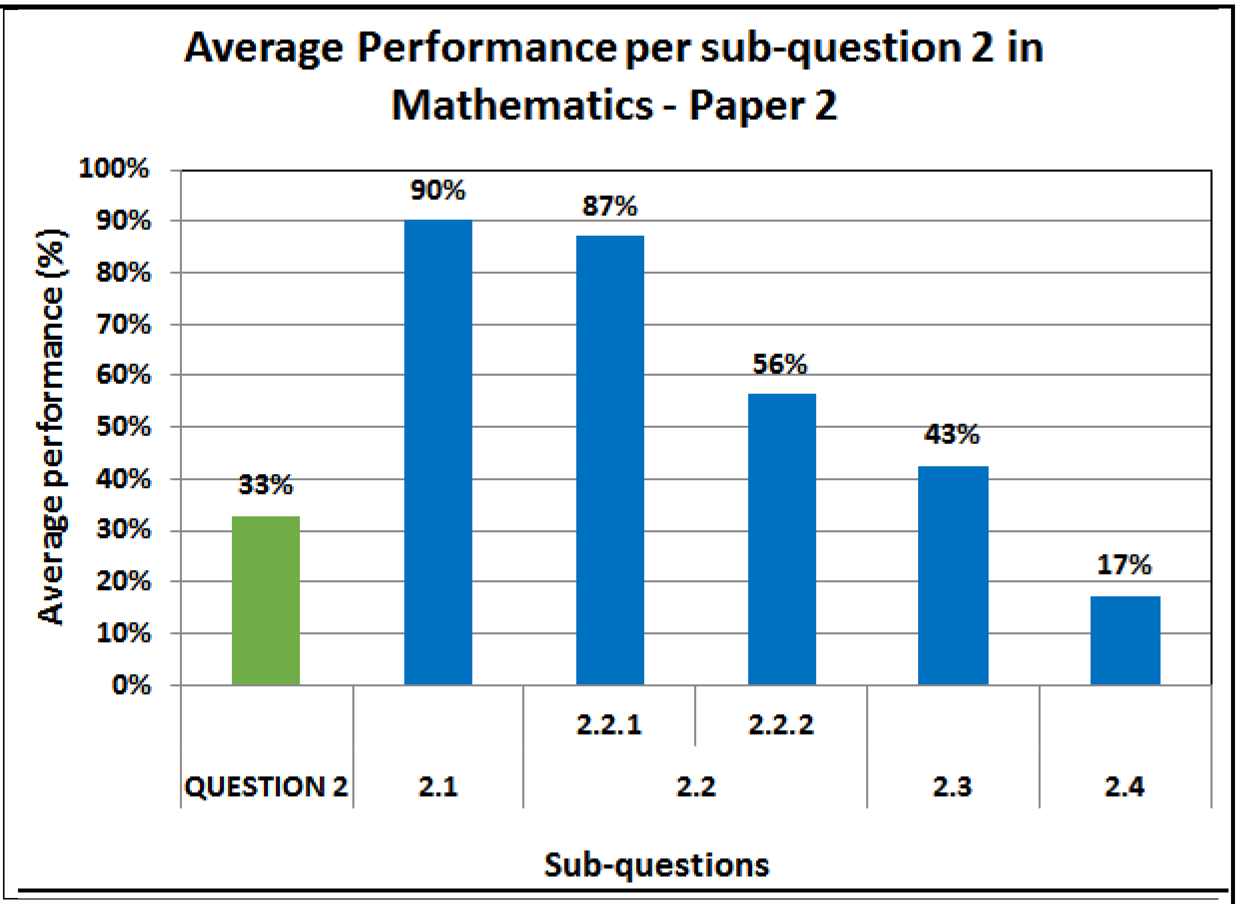
2.2.1 Which ONE of the given correlation coefficients best fits the plotted data? (1)

2.2.2 Use the scatter plot and least squares regression line to motivate your answer to QUESTION 2.2.1. (1)

2.3 What does the data suggest about the speed of a tennis serve (in km/h) and the height of a player (in metres)? (1)

2.4 The equation of the regression line is given as $\hat{y} = 27{,}07 + bx$.
Explain why, in this context, the least squares regression line CANNOT intersect the y-axis at $(0 ; 27{,}07)$. (1)

[5]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was poorly answered.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
Language and context was a barrier based on the following,
2.2.2. Candidates lack understanding on the spread of data.

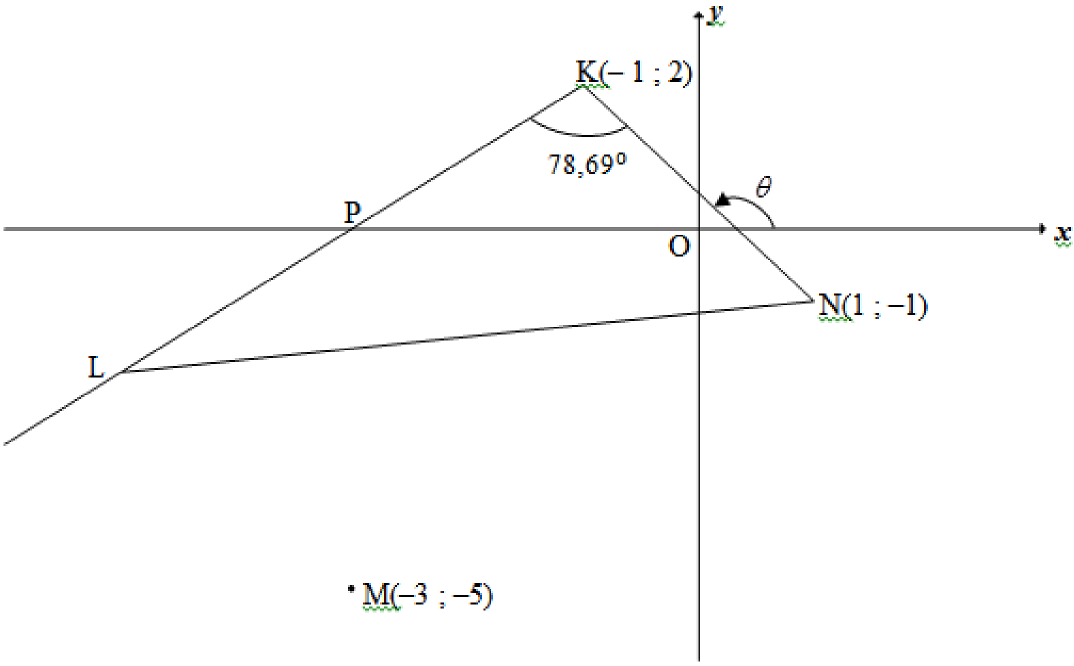
(c) Provide suggestions for improvement in relation to Teaching and Learning
Educators must focus more on the interpretation in statistics.
Learners need to understand the meaning of correlation coefficient and least squares regression line before they will be able to interpret on spread.
Show practical examples to illustrate the above concepts.

(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Statistics must be included in teacher development workshops.

QUESTION 3
This question tested basic Analytical Geometry – gradients, length and equation of the line, determining the coordinates and the area of a triangle.

QUESTION 3

In the diagram, K(– 1 ; 2), L and N(1 ; – 1) are vertices of ΔKLN such that $L\hat{K}N = 78{,}69°$. KL intersects the x-axis at P. KL is produced. The inclination of KN is θ. The coordinates of M are (–3 ; –5).



3.1 Calculate:

3.1.1 The gradient of KN (2)

3.1.2 The size of θ, the inclination of KN (2)

3.2 Show that the gradient of KL is equal to 1. (2)

3.3 Determine the equation of the straight line KL in the form $y = mx + c$. (2)

3.4 Calculate the length of KN. (2)

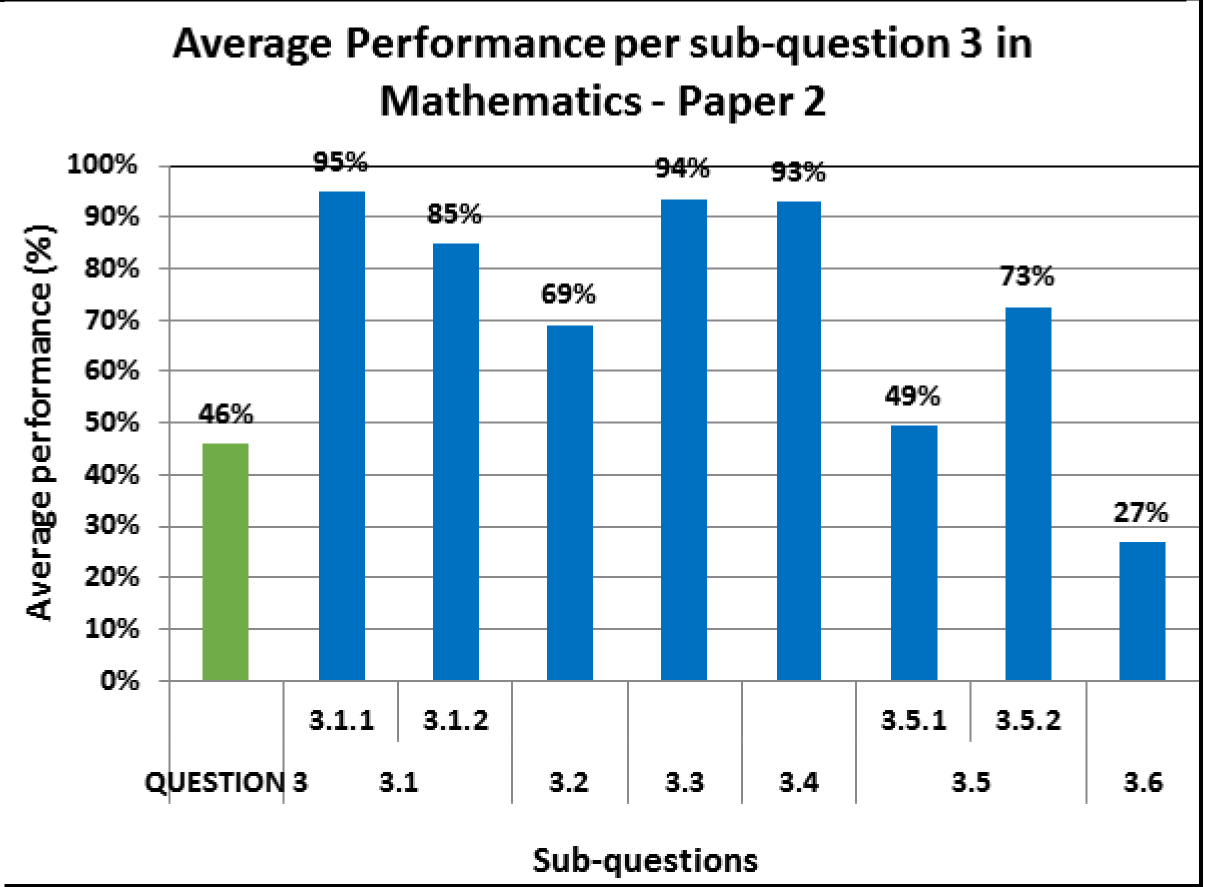
3.5 It is further given that KN = LM.

3.5.1 Calculate the possible coordinates of L. (5)

3.5.2 Determine the coordinates of L if it is given that KLMN is a parallelogram. (3)

3.6 T is a point on KL produced. TM is drawn such that TM = LM. Calculate the area of ΔKTN. (4)

[22]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question had mixed results .
3.1.1 to 3.1.4 were well answered.
3.2 had fair results and question.
3.5.1 had average results.
Learners struggled with question 3.6 and the result were poor (4 Marks).
On average the performance was fair.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
3.2 majority of candidates failed to link the gradient of a line to the inclination.
3.5.1 most candidates assumed that KLMV is a parallelogram because they saw that in 3.5.2.
Many learners assumed that P is a midpoint of KL in both 3.5.1 and 3.5.2
3.6 Most candidates could not visualize point T on KL.

(c) Provide suggestions for improvement in relation to Teaching and Learning
Candidates should be encouraged to use diagrams in their answer books.
They must fill in all the information they know, as they are solving the problem.

Learners should be taught to link a positive gradient to an acute and a negative gradient
to obtuse angles.

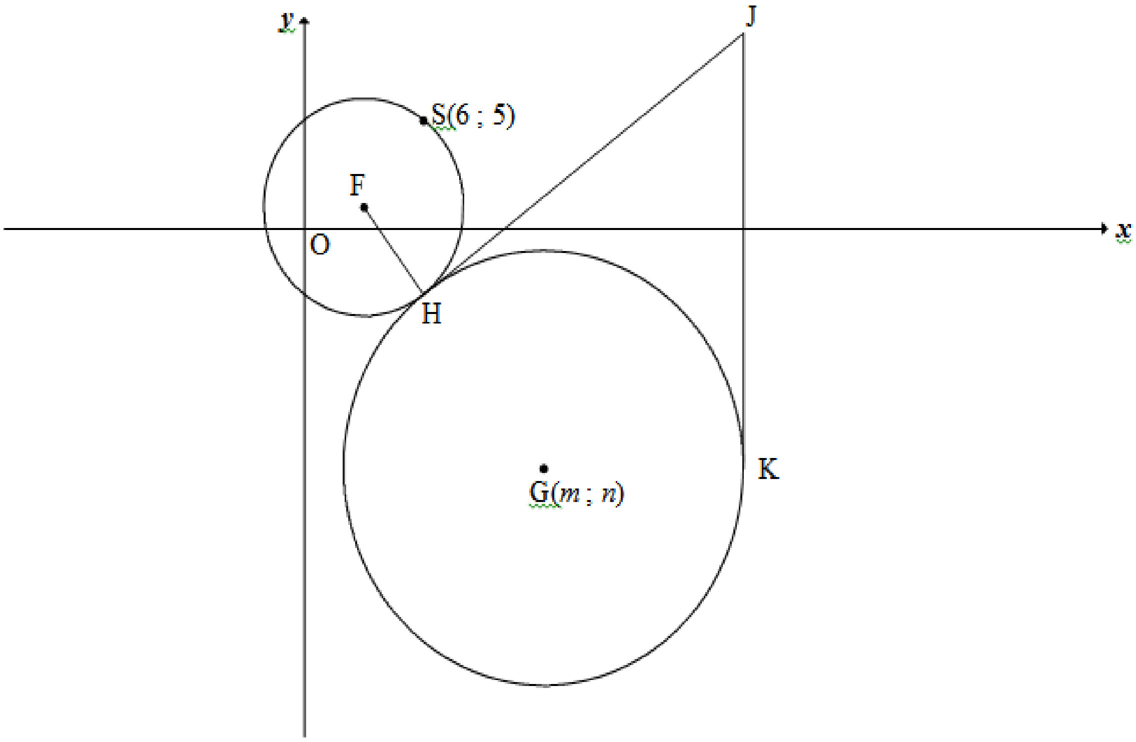
(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Educators must emphasize to the learners to follow the sequence of questions
Learners need to realize that they must not use information that is given in the later question to solve a problem in the earlier question e.g Q3.5.2 states that KLMN is a parallelogram.
Many candidates then used this information to do Q 3.5.1. which is not acceptable.
Learners must never use additional information regarding the diagram which is given
further down the question.

QUESTION 4

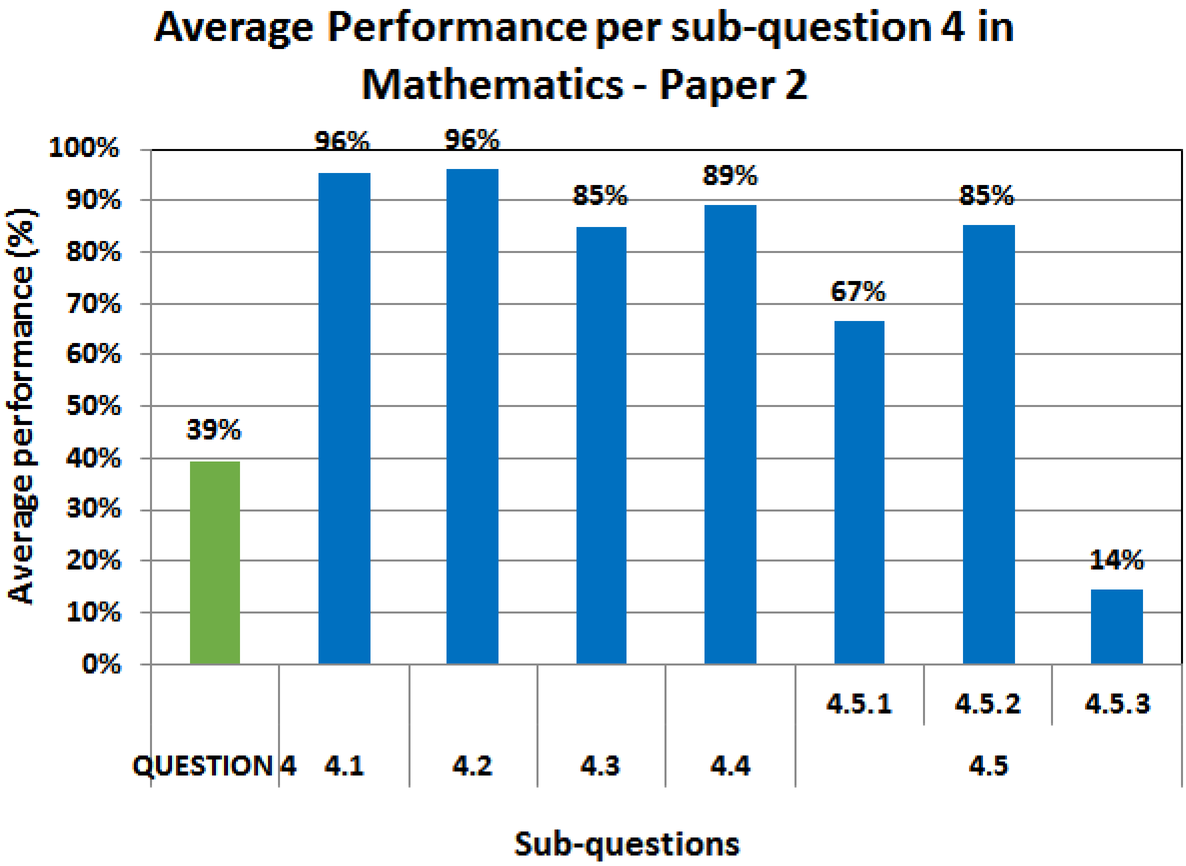
This question tested Analytical geometry in circles-determining the coordinate of the centre of the circle, length of the line , length of equal tangents.

QUESTION 4

In the diagram, the equation of the circle with centre F is $(x-3)^2+(y-1)^2=r^2$. S(6 ; 5) is a point on the circle with centre F. Another circle with centre G(m ; n) in the 4th quadrant touches the circle with centre F, at H such that FH : HG = 1 : 2. The point J lies in the first quadrant such that HJ is a common tangent to both these circles. JK is a tangent to the larger circle at K.



4.1	Write down the coordinates of F.	(2)
4.2	Calculate the length of FS.	(2)
4.3	Write down the length of HG.	(1)
4.4	Give a reason why JH = JK.	(1)
4.5	Determine:	
	4.5.1 The distance FJ, with reasons, if it is given that JK = 20	(4)
	4.5.2 The equation of the circle with centre G in terms of m and n in the form $(x-a)^2+(y-b)^2=r^2$	(1)
	4.5.3 The coordinates of G, if it is further given that the equation of tangent JK is $x=22$	(7)
		[18]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was answered fairly in question 4.1 to 4.4. candidates, however, did struggle with the concept of a ratio given in the statement as FH:HG=1:2.
Most candidates scored 2/4 in 4.5.1 because they did not state the reason, though
the question reminded them to state the reasons.
4.5.2 was well answered, but because G lies in the fourth quadrant, candidates used
y=-n instead of y=n.
4.5.3 was poorly answered, most learners could not even attempt it.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
4.5.1: candidates did not state FH$\perp$HJ with reason; they fail to integrate circle geometry
with analytical geometry.
4.5.2 : since G was in the fourth quadrant ,they wrote the equation of the circle as $(\boldsymbol{x}-\boldsymbol{m})^2+(\boldsymbol{y}-(-\boldsymbol{n}))^2 = \boldsymbol{r}^2$
4.5.3 : candidates could not link question 4.3 with question 4.5.3 and failed to see that
tangent JK is vertical , point J and K shared the same x –coordinate and G and K the same
y-coordinate.

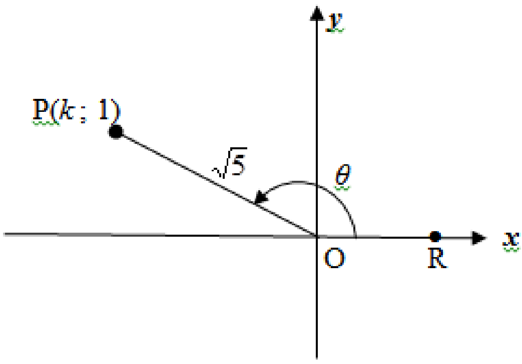
(c) Provide suggestions for improvement in relation to Teaching and Learning
Candidates should expect the integration of other topics in the whole question paper.
Euclidean Geometry statements should always be followed by a reason, regardless in
which section of paper it is used.

(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Educators must encourage the candidates to analyze the diagrams better and register the
given information on the diagram sheet and instructions thoroughly.

QUESTION 5
This question tested Trigonometry – Trigonometric ratios of point in quadrant, Trigonometric Identities, integration of trigonometry and summation.

QUESTION 5

5.1 In the diagram, $P(k\ ;\ 1)$ is a point in the 2^{nd} quadrant and is $\sqrt{5}$ units from the origin. R is a point on the positive x-axis and obtuse $R\hat{O}P = \theta$.



5.1.1 Calculate the value of k. (2)

5.1.2 **Without using a calculator**, calculate the value of:

(a) $\tan\theta$ (1)

(b) $\cos(180° + \theta)$ (2)

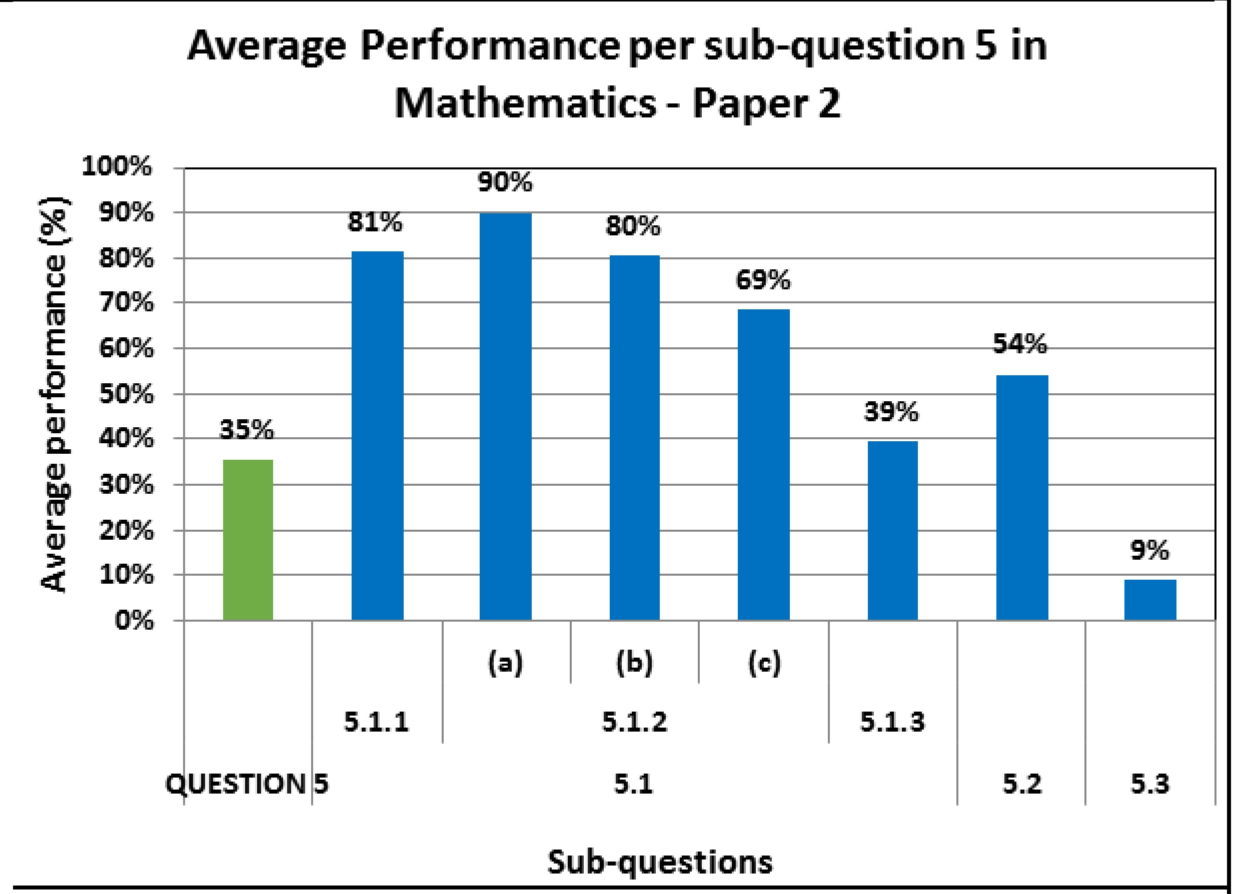
(c) $\sin(\theta + 60°)$ in the form $\dfrac{a+b}{\sqrt{20}}$ (5)

5.1.3 **Use a calculator** to calculate the value of $\tan(2\theta - 40°)$ correct to ONE decimal place. (3)

5.2 Prove the following identity: $\dfrac{\cos x + \sin x}{\cos x - \sin x} - \dfrac{\cos x - \sin x}{\cos x + \sin x} = 2\tan 2x$ (5)

5.3 Evaluate, **without using a calculator**: $\displaystyle\sum_{A=38°}^{52°} \cos^2 A$ (5)

[23]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was answered by the majority of the learners.
Fewer candidates managed to answer 5.1.2 and 5.1.3.
5.3 was a challenge to most of the learners.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
Most candidates lack the basic skills in Trigonometry.
It is clear that some learners struggle in the correct use of a calculator.
Candidates did not realize that they can use the answer in 5.1.2 to determine the value of θ and hence answer 5.1.3
The sigma in 5.3 made the candidates to associate this notation with the arithmetic
sequence in paper 1 and hence they did not manage to score marks. (5)
Some learners lack basic skills from grade 7 to grade 9, like addition and subtraction of fractions, use of brackets when subtracting or multiplying binomial, squaring of binomials, correct use of signs when manipulating integers. That was evident in 5.2.

(c) Provide suggestions for improvement in relation to Teaching and Learning
Revise basic Trigonometric equations from grade 10 and grade 11.
Educators must organize revision material and drill learners on different approaches, and
various question papers.
Teaching grade 12 topics should always be linked to grade 10 and grade 11 work.

(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
The Mathematics department must ensure that they cover the whole syllabus in grade 8 to
grade 11 to avoid content gaps in the learner's knowledge.

QUESTION 6
This question tested Trigonometry – Period of tangent graph, General solution of Trigonometric graph, Sketching Trigonometric graph, Reading off the Trigonometric graph, Transformation of a Trigonometric graph.

QUESTION 6

Consider: $f(x) = -2\tan\frac{3}{2}x$

6.1 Write down the period of f. (1)

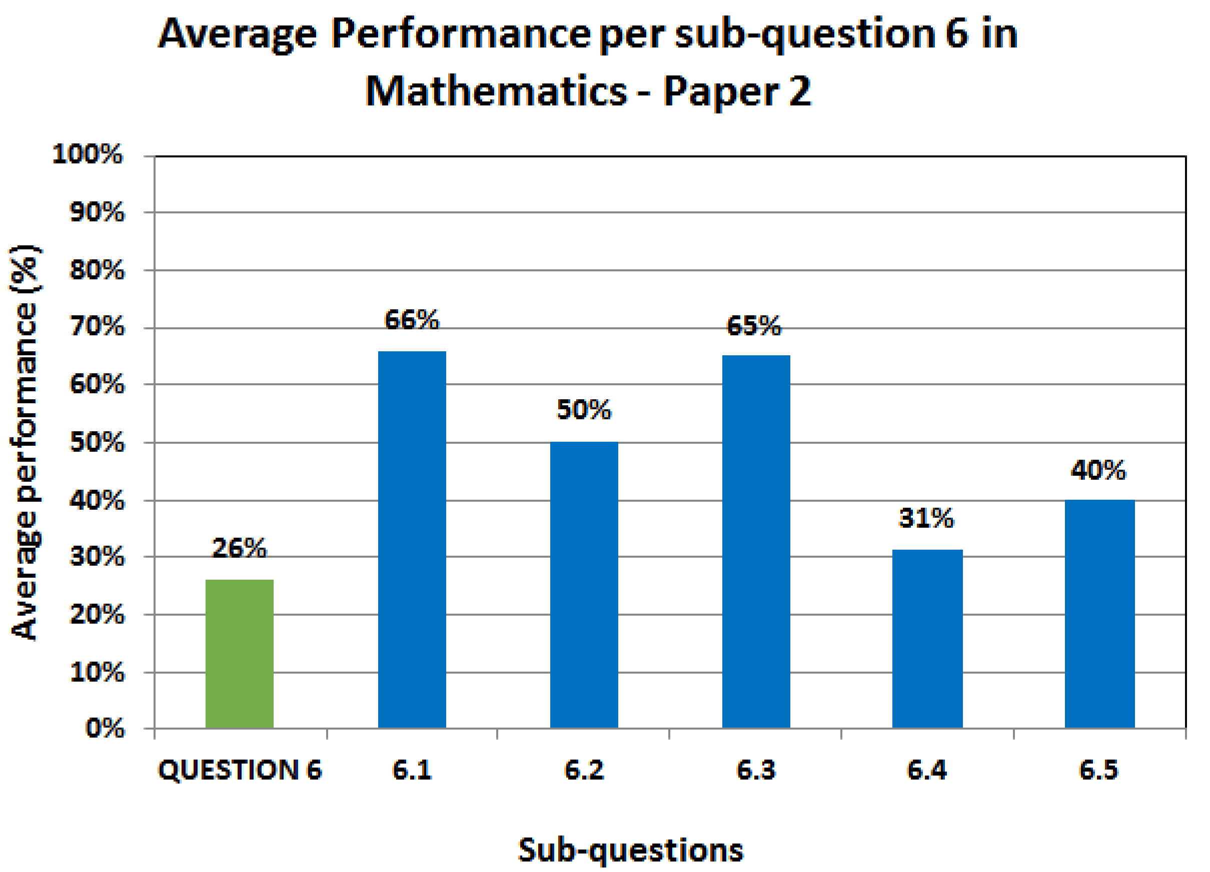
6.2 The point $A(t\,;\,2)$ lies on the graph. Determine the general solution of t. (3)

6.3 On the grid provided in the ANSWER BOOK, draw the graph of f for the interval $x \in [-120°\,;\,180°]$. Clearly show ALL asymptotes, intercepts with the axes and endpoint(s) of the graph. (4)

6.4 Use the graph to determine for which value(s) of x will $f(x) \geq 2$ for $x \in [-120°\,;\,180°]$. (3)

6.5 Describe the transformation of graph f to form the graph of $g(x) = -2\tan\left(\frac{3}{2}x + 60°\right)$. (2)

[13]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was fairly answered.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
Most candidates could not draw a correct graph and find solutions reading from the graph.
It is clear that many candidates struggle to work with an angle if the coefficient is a fraction.
Many candidates did not get the transformation correct, instead of shifting 40 units to the left
they shifted 60 units to the left, which clearly indicate that they failed to take out $^3/_2$ as a common factor.

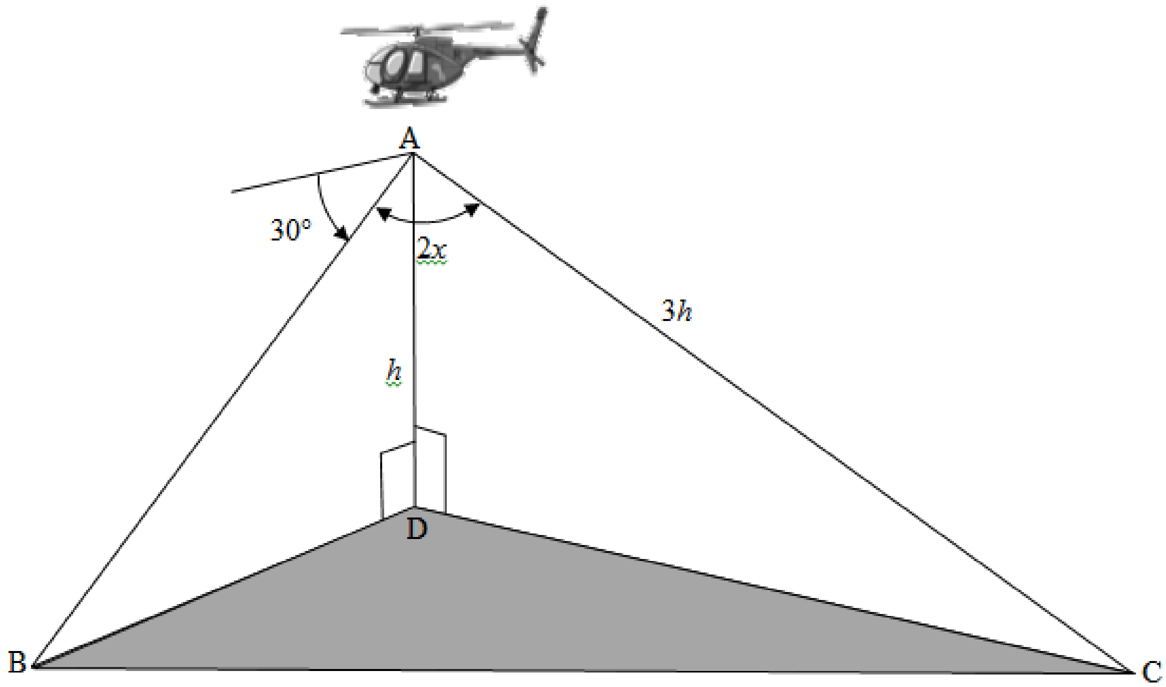
(c) Provide suggestions for improvement in relation to Teaching and Learning
It is important that learners must be given examples which promote understanding rather than recipes.
Mathematics must be taught by using principles rather than methods.
Educators must explain to the learners to take out the coefficient of θ horizontal transformation.
Many candidates made an error writing $f(x) = -2\tan\left(\frac{3}{2}x + 60°\right)$
instead of writing $f(x) = -2\tan\frac{3}{2}(x + 40°)$

(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Educators are encouraged to include exercises with fractions when they are teaching
trigonometric graphs.

QUESTION 7
This question tested Trigonometry – Trigonometric ratios in Triangles, 3-D application of Trigonometric formulae.

QUESTION 7

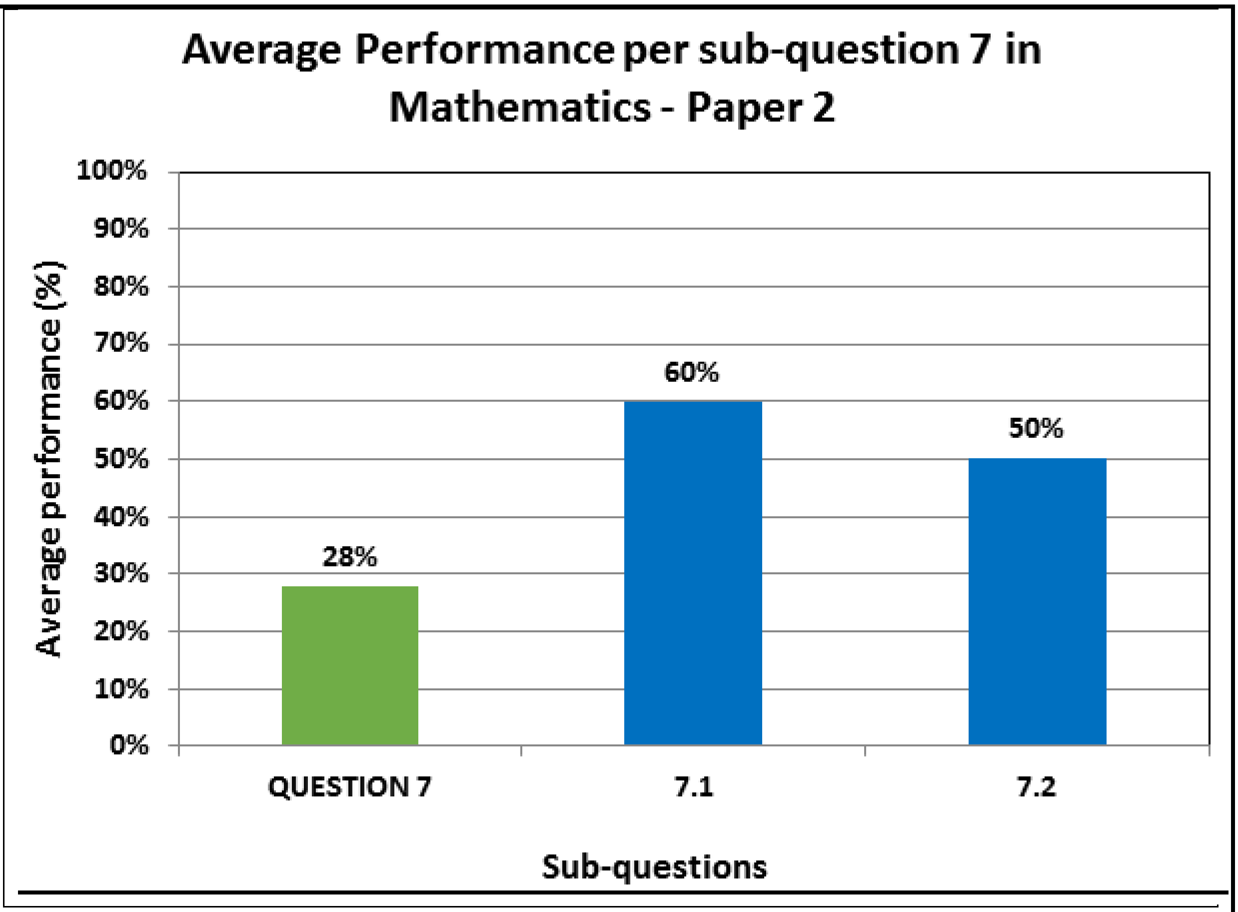
A pilot is flying in a helicopter. At point A, which is h metres directly above point D on the ground, he notices a strange object at point B. The pilot determines that the angle of depression from A to B is $30°$. He also determines that the control room at point C is $3h$ metres from A and $B\hat{A}C = 2x$. Points B, C and D are in the same horizontal plane. This scenario is shown in the diagram below.



7.1 Determine the distance AB in terms of h. (2)

7.2 Show that the distance between the strange object at point B and the control room at point C is given by $BC = h\sqrt{25 - 24\cos^2 x}$. (4)

[6]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was poorly answered. Only the top candidates scored full marks in this question.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
Most candidates have a challenge in interpreting three dimensional diagrams.
Some candidates could not find $A\hat{B}D = 30°$, using properties of parallel lines.
Some candidates substituted correctly in the wrong cosine formula though it is given in the
formula sheet.
The most common error was $BC^2 = AB^2 + AC^2 + 2.AB.AC.Cos\hat{A}$ OR $BC^2 = AB^2 + AC^2 + 2.AB.AC.Sin\hat{A}$

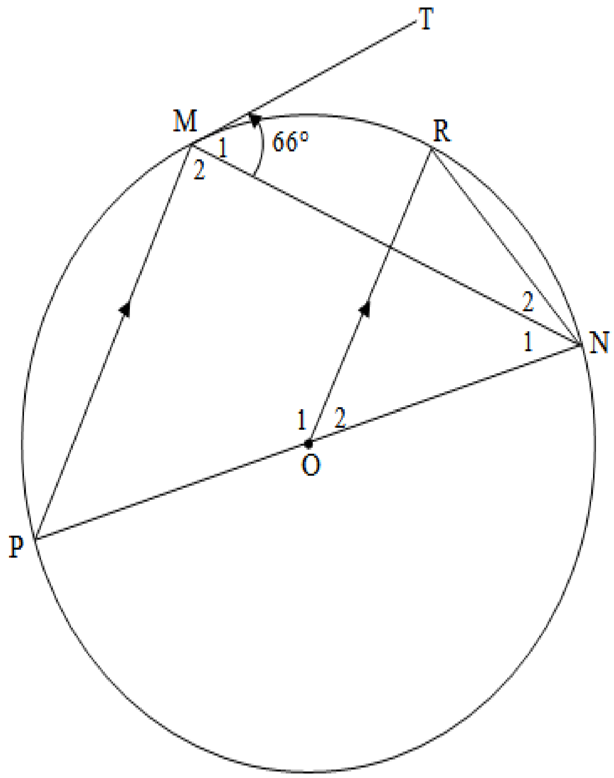
(c) Provide suggestions for improvement in relation to Teaching and Learning
Learners are encouraged to practice more exercises using 3 D diagrams, emphasis on the
angle of elevation, depression, application of the Trigonometrical ratios.
The use of a model could help the learners to understand the dimensions.

(d)	Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
Candidates should be encouraged to use formula sheet even if they are given classwork.	
Practice the correct application of trigonometric rules in the correct triangles.	
When the rule is applied, the sides and the angles used must all be in the same triangle.	

QUESTION 8
This question tested Euclidean Geometry – Application of circle Geometry Theorems, Application of ratios and proportions.

QUESTION 8

8.1 PON is a diameter of the circle centred at O. TM is a tangent to the circle at M, a point on the circle. R is another point on the circle such that $OR \parallel PM$. NR and MN are drawn. Let $\hat{M}_1 = 66°$.



Calculate, with reasons, the size of EACH of the following angles:

8.1.1 $\hat{P}$ (2)

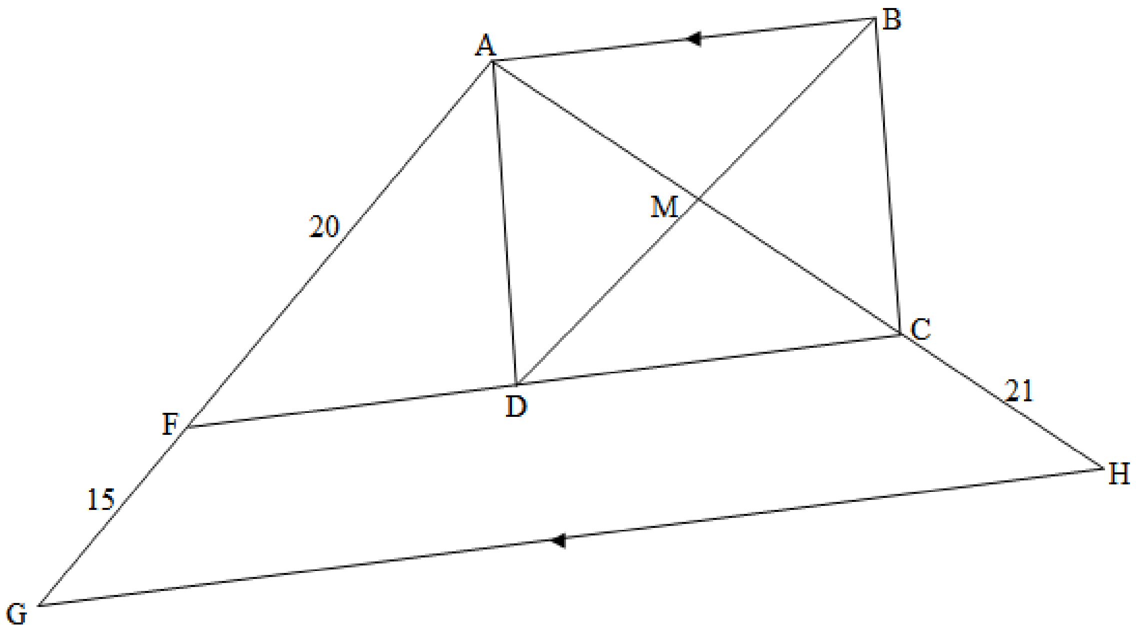
8.1.2 $\hat{M}_2$ (2)

8.1.3 $\hat{N}_1$ (1)

8.1.4 $\hat{O}_2$ (2)

8.1.5 $\hat{N}_2$ (3)

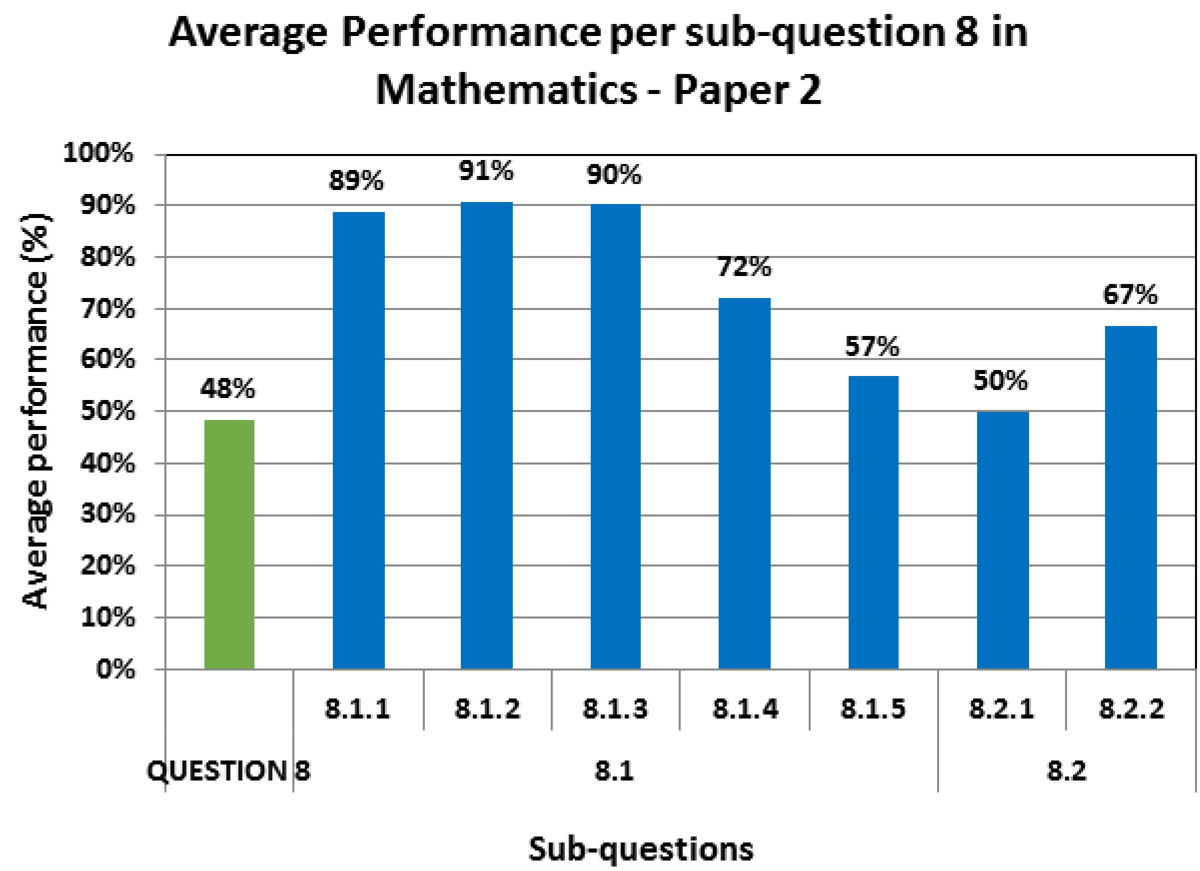
8.2 In the diagram, ΔAGH is drawn. F and C are points on AG and AH respectively such that AF = 20 units, FG = 15 units and CH = 21 units. D is a point on FC such that ABCD is a rectangle with AB also parallel to GH. The diagonals of ABCD intersect at M, a point on AH.



8.2.1 Explain why FC || GH. (1)

8.2.2 Calculate, with reasons, the length of DM. (5)

[16]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
This question was well answered by the majority of the candidates.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
8.1.1 to 8.1.4 Almost all the candidates attempted this question correctly.
Few learners did not supply correct reasons, evident in 8.1.2 where some candidates
indicated that $P\hat{M}N = O\hat{R}N$ $(subtended\ by\ the\ same\ chord\ ON)$ **which is incorrect.**
8.1.5 was answered well, though some learners could not see that $P\hat{O}R = 2\hat{N}$ **.**
8.2.1 and 8.2.2 was well answered but some of the learners did not know the properties
of a rectangle or fail to mention opposite sides of a rectangle as a reason in 8.2.1.

(c) Provide suggestions for improvement in relation to Teaching and Learning
Grade 10 Educators are encouraged to re-establish their knowledge of quadrilateral
properties from grade 7 to grade 10.
Integration of grade 8 to 12 geometry.

(d)	Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.

Educators are encouraged to use acceptable reasons as outlined in the examination guideline

throughout teaching geometry.

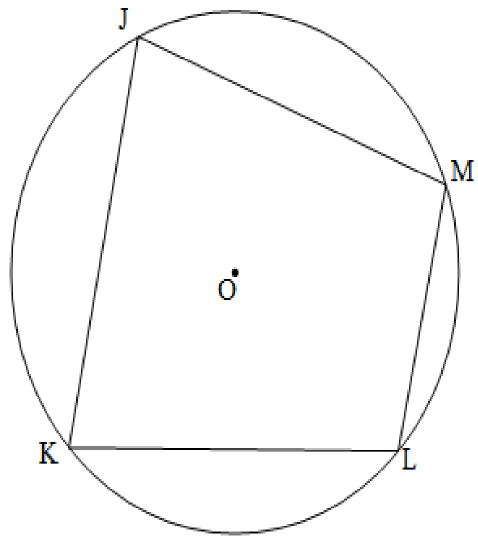
Learners and perhaps , some educators, lack basic knowledge of Euclidean Geometry though

there is a slight improvement as from the past.

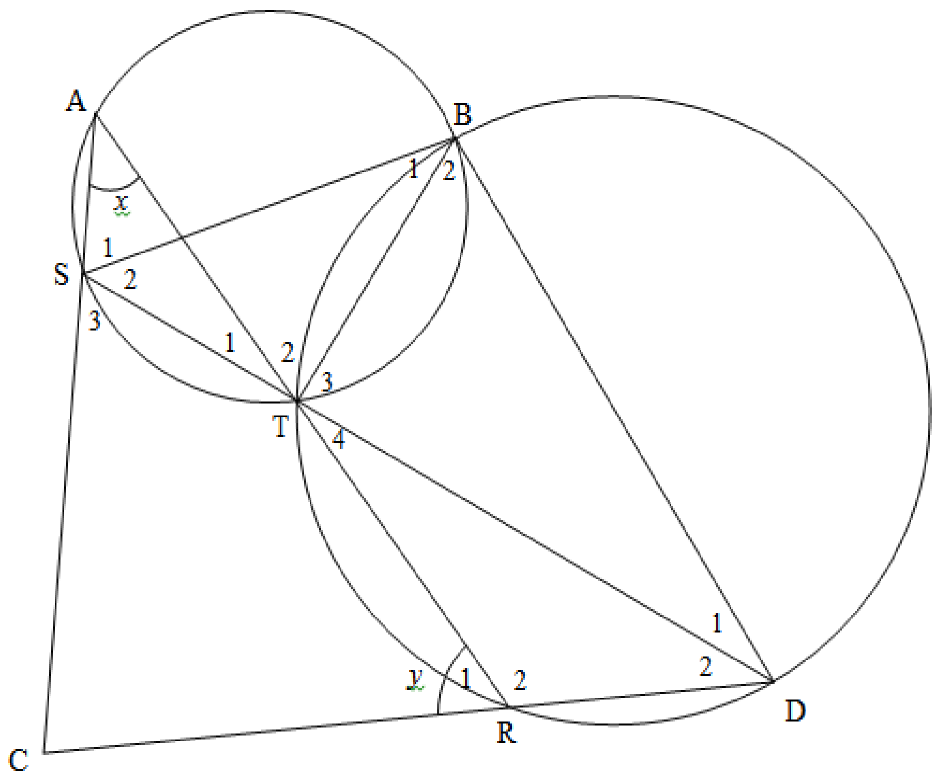
QUESTION 9
This question tested Euclidean Geometry – Circle Geometry Theorems, Application of circle Geometry Theorems.

QUESTION 9

9.1 In the diagram, JKLM is a cyclic quadrilateral and the circle has centre O. Prove the theorem which states that $\hat{J} + \hat{L} = 180°$. (5)



9.2 In the diagram, a smaller circle ABTS and a bigger circle BDRT are given. BT is a common chord. Straight lines STD and ATR are drawn. Chords AS and DR are produced to meet in C, a point outside the two circles. BS and BD are drawn. $\hat{A} = x$ and $\hat{R}_1 = y$.



9.2.1 Name, giving a reason, another angle equal to:

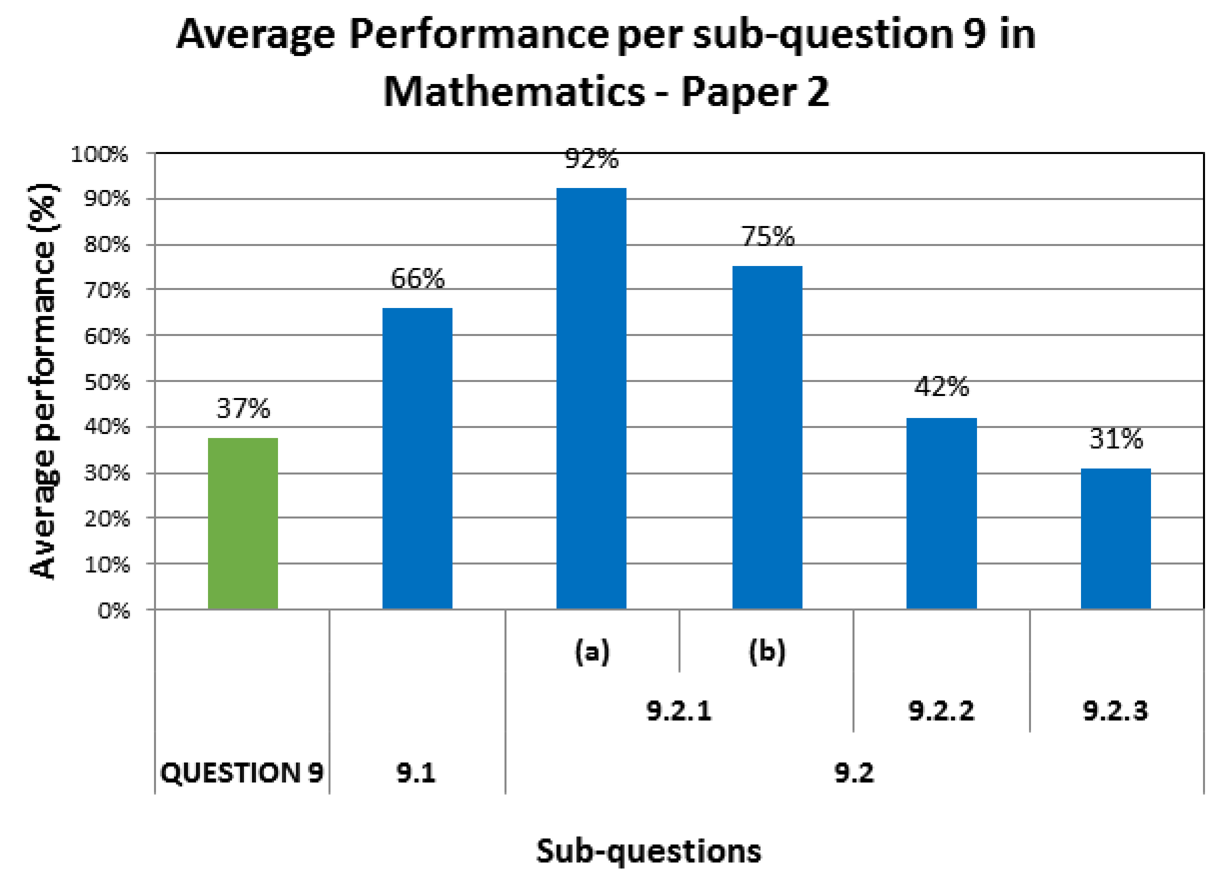
(a) x (2)

(b) y (2)

9.2.2 Prove that SCDB is a cyclic quadrilateral. (3)

9.2.3 It is further given that $\hat{D}_2 = 30°$ and $A\hat{S}T = 100°$.
Prove that SD is not a diameter of circle BDS. (4)

[16]



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
9.1 and 9.2.1 The majority of learners attempted.
9.2.2 and 9.2.3 were fairly attempted.
It appears that the skill of proving a quadrilateral cyclic, and a line as a diameter,
has been achieved.

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
9.1: Many learners either omitted the construction or did an incorrect construction.
Although they answered the question, it was worth 0 without the correct construction.
9.2.1 : Most candidates answer 9.2.1 (a) correctly but found 9.2.1 (b) more difficult and
gave the wrong reason for 9.2.1(b).
9.2.2. and 9.2.3 : Lack of experience was evident in this question with many candidates
start by using what they, in fact, had to prove.
For example $\hat{B}+\hat{C}=180°$ ($opposite\ angles\ of\ a\ cyclic\ quadrilateral$)
Candidates seem not to know how to set out the steps for a logical appropriate order.

(c) Provide suggestions for improvement in relation to Teaching and Learning
Candidates need to realize the importance of the construction and naming of angles in a
proof ($e.g\ \widehat{O}_1\ ;\ \widehat{O}_2$). They should be taught to realize that the theorem proved, is likely to be
needed to solve the next problem. The reason and the way it is written is absolutely vital in
the proof,(for example, opposite angles are supplementary) or (converse of opp. $\angle\ s\ of\ cyclic\ quad$)
9.2.2. Many candidates are not giving correct reasons e.g. ($\angle at\ centre = 2 \times \angle\ at\ circumference$) has been shortened to (Centre theorem) or ($\angle\ at\ the\ centre$)
Basic geometry skills need more practice and learners should be exposed to more level 3
and level 4 questions.

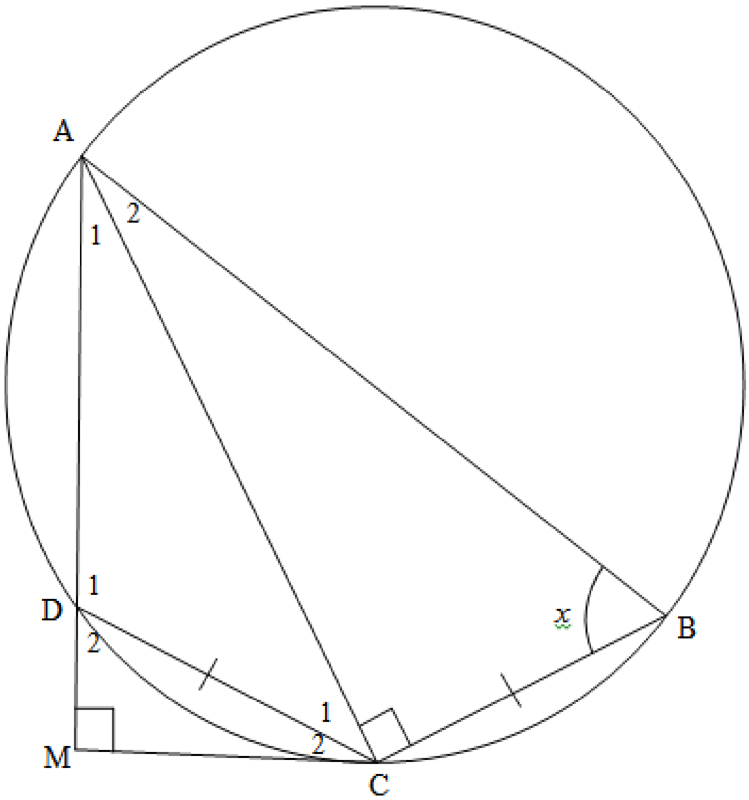
(d) Describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
The secret to success in geometry is PRACTISE.
Practise, practise to gain experience and be able to cope with level 3 and 4 questions.

QUESTION 10

This question tested Euclidean Geometry – Integrated Application of Geometry theorems , Application of ratio and proportion.

QUESTION 10

In the diagram, ABCD is a cyclic quadrilateral such that $AC \perp CB$ and $DC = CB$. AD is produced to M such that $AM \perp MC$. Let $\hat{B} = x$.



10.1 Prove that:

10.1.1 MC is a tangent to the circle at C (5)

10.1.2 $\Delta ACB \parallel\!| \Delta CMD$ (3)

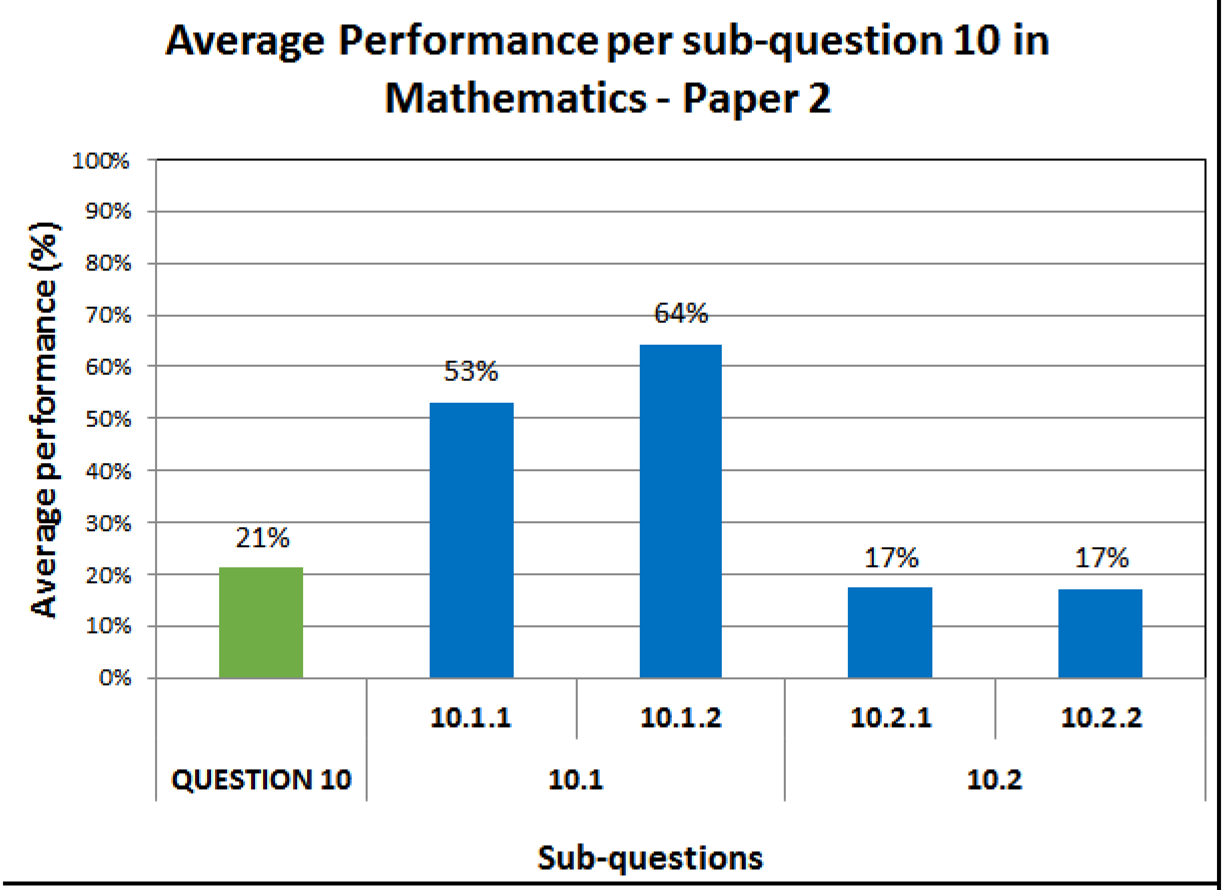
10.2 Hence, or otherwise, prove that:

10.2.1 $\dfrac{CM^2}{DC^2} = \dfrac{AM}{AB}$ (6)

10.2.2 $\dfrac{AM}{AB} = \sin^2 x$ (2)

[16

TOTAL: 150



(a)General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?
10.1: Poorly answered by most candidates.
10.2 : Candidates were mostly able to match up the angles in the two triangles.
10.2.1 : Poorly answered as it was a level 4 question.
10.2.2 : Poorly answered

(b) Why the question was poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.
One of the reasons that question 10 as a whole was poorly answered, is that candidates
ran short of time at the end of the question paper. They struggled through the challenging
questions earlier in the paper.
10.1.1: Most candidates struggled with the proof , with many assuming that MC is tangent
and not PROVING that it is a tangent.
10.1.2: Many candidates matched up the angles correctly in the two triangles although
they had been unable to do Q 10.1.1.
Correct reasons and acceptable ways of writing angles are a problem e.g .(tan/chord)
instead of (converse of tan/chord theorem) and $\hat{C}_{1+2}$ **instead of** $A\hat{C}M$.
10.2.1 : Many candidates confuse similarity with congruence, mentioning the equal sides
and using (SAA) as a reason.

10.2.1 was very challenging and although there were many ways to arrive at the
correct solution, very few candidates achieved this.
10.2.2 : Few candidates realize that this question followed very easily from 10.2.1

(c) Provide suggestions for improvement in relation to Teaching and Learning
Learners should be taught basis geometry but improve their skill with past question papers.
Geogebra could be used to provide visual reinforcement of how the theorems work and
how they are applied in various situations.

(d) describe any other specific observations relating to responses of learners and comments that are useful to teachers, subject advisors, teacher development etc.
The secret to success in geometry is PRACTISE.
Practise , practise to gain experience and cope with level 3 and 4 questions.