EXAMINATIONS COUNCIL OF ESWATINI

EPC

EXAMINATION REPORT

FOR

MATHEMATICS

YEAR

2019

EPC Mathematics Paper 212/01

General comments

Candidates' performance in 2019 EPC Mathematics Paper 1 Examination was good. This was evident from that a majority of them obtained scores which were above average (50%). In section A, it was observed that a majority of candidates provided working which guided them in the selection of their answers. In Section B, candidates performed very well on questions taken from number and data handling. Their weakest area was on shape and problem-solving questions. It is also worth pointing out that candidates did very well in the manner in which they presented their working when responding to questions. The report below presents the analysis of candidates' responses in the examination questions:

Section A (MULTIPLE CHOICE)

Question 1

The place value of **4** in the number 20**4**0 is_____?

In this question, candidates were expected to identify the place value of '**4**' in a given four digit number. This task proved to be easy for a majority of candidates as they were able to choose the correct answer.

Answer: B

Question 2

What is $\frac{1}{5} + \frac{2}{5}$ equal to?

Candidates were supposed to demonstrate their ability to add unit fractions and they performed very well in this task. A popular wrong choice was B indicating a misconception of adding numerators and denominators.

Answer: A

Question 3

Which of the following lengths is the longest?

The question required candidates to compare given lengths by considering different measurement units. An average performance was identified with this task. A popular wrong choice was A – 120 cm, this seemed to be the longest because of the bigger number in the given measurement.

Answer: C

Question 4

A radio program started at 11:00 am and ended at half past 11.

How long did the radio program last?

Calculation of time duration proved to be an easy task for a majority of candidates as indicated by their ability to select the correct option. The choice of a wrong option was evenly distributed amongst the three options.

Answer: A

Question 5

What is 7213 − 6508 equal to?

Finding the difference between two given numbers also proved to be an easy task for candidates as a majority of them chose the correct option. Option **C** – 615 was identified as a popular wrong choice, this indicates that these candidates had a challenge with the concept of regrouping when subtracting.

Answer: B

Question 6

The HCF of 8 and 24 is_____.

A majority of candidates were able to find the Highest Common Factor of 8 and 24. A wrong popular choice was **C**-4 indicating that for most candidates 8 is not taken as a factor of 8.

Answer: D

Question 7

The sum of 3016 and 1085 is_____.

In this question some candidates were able to demonstrate their understanding of the meaning of ‘sum’ as they were able to choose the correct answer. This question required candidates to add by regrouping and it was seen that they had difficulties with this concept by choosing B-4091 as their answer.

Answer: C

Question 8

If you add up all even numbers between 1and 9, what is the answer?

In this question, it was observed that a majority of candidates did not understand what the question required of them as their choice of wrong options were evenly distributed. It is highly possible that in their addition they missed some even numbers. Also, it looks like there was also a confusion between even and odd numbers.

Answer: B

Question 9

A triangle that has only two equal angles is called_____.

Most candidates were able to choose the name of a triangle with two equal angles. However, the popular wrong option was **D**-Equilateral triangle.

Answer: C

Question 10

If six children share 146 pens equally.

How many pens will remain?

In this question, candidates were expected to divide 146 by 6 to be able to choose the correct answer. This task proved to be challenging to a majority of candidates as they chose **A**- 0 as their answer. This means that these candidates failed to get the remainder when dividing 146 by 6.

Answer: B

Question 11

56 = 5 groups of 8 + _____ groups of 8

There was an average performance in this question, a frequent wrong choice was **C** indicating a direct interpretation 56 to be equal to 8 × 7 and neglecting the grouping aspect.

Answer: B

Question 12

What is the value of (21 + 5) ÷ (4 – 2)?

This question proved to be challenging to a majority of candidates as seen in their popular choice of **B** – 26 which means they added 21 and 5 and ignored the other processes of subtraction and division.

Answer: C

Question 13

What is the third number in the pattern below:

2870, 2890, _____, 2930, 2950

The task of completing a number pattern proved to be very easy for a majority of candidates as they were able to choose the correct option.

Answer: D

Question 14

Mfikile has exactly 5 coins adding up to E1.00 in his pocket.

How many 10 cents coins does he have?

This was a problem solving question and from the evenly distributed choices of wrong answers it means candidates had a challenge in interpreting the task.

Answer: B

Question 15

Which one of the following quantities is arranged from the least to the largest?

A majority of candidates performed very well in this question. It is suspected that the cause for selecting wrong options in this question was comparing without considering the importance of units in measurement.

Answer: D

Question 16

What is the next prime number?

3, 5, 7, ___.

There was an average performance in this question, a popular wrong choice was **B** – 9 indicating a confusion in candidates understanding of prime numbers and odd numbers.

Answer: C

Question 17

What is the median of the given set of numbers?

2, 5, 5, 4, 4, 6, 9, 8, 4

This question proved to be very easy for a majority of candidates as they were able to choose the correct answer. The popular wrong option was **C**-4 indicating a failure to re-arrange the numbers before identifying the median.

Answer: B

Question 18

Mbuso ate $\frac{1}{6}$ of a cake and Patience ate $\frac{4}{6}$ of the same cake.

What fraction of the cake was not eaten?

The performance of candidates was below average in this question. There were two popular wrong options in this task, **A** and **B**. This indicated a misunderstanding of the question and a misconception in addition of fractions.

Answer: C

Question 19

What is the name of the solid shape below:?

Naming of a given solid shape proved to be very easy for a majority of candidates as they were able to choose the correct answer.

Answer: B

Question 20

In a hall there are 23 rows with 25 chairs in each row.

There is an extra row with 19 chairs.

Which number sentence can help to calculate the total number of chairs in the hall?

This was a problem solving question and it proved to be very difficult to a majority of candidates. Their choices of wrong options was evenly distributed. This indicates a challenge in proper interpretation of the problem in order to apply the correct strategy to solve the problem.

Answer: A

Section B

Question 21

(a) (i) Candidates in this question were expected to write the number of decades in 70 years.

Responses of candidates indicated that they performed very well in this question. There were Responses where it was observed that there was confusion in years, century and decades. The wrong responses were presented as shown below:

"70 × 100 = 7000 decades" and "70 × 12 = 840 decades"

The correct answer was 7 decades.

(a) (ii) The question required candidates to calculate the number of hours in $2\frac{1}{2}\ days$. Their responses showed an understanding of converting days to hours but a challenge was created by the inclusion of $\frac{1}{2}$ which made some to present their working as shown: "2 × 24" + 30 minutes = 48 hours 30 minutes. This indicates a confusion between the use of half an hour and half a day.

The correct answer was 60 hours.

(b) This question expected candidates to round off 68 789 to the nearest 10. Candidates performed very well in this question by rounding off to required place value. However there were cases which indicated that a confusion was created by the inclusion of 9 in the Ones place value. The final answer for these candidates was 70.

The correct answer was 68 790.

(c) Completing a table by converting fractions to decimals and percentages proved to be an easy task for a majority of candidates as they performed very well in this question.

Answer:

Fraction	Decimal	Percentage
$\frac{4}{10}$	0.4	40%
$\frac{75}{100}$	0.75	75%

(d) Naming of given plane shapes was an easy task for candidates as they were able to name the shapes as pentagon and trapezium.

The correct answer was *B is a pentagon* for **(i)** and *C is a trapezium* for **(ii)**.

Question 22

(a) In this question candidates were expected work out 7.4 – 0.83. From candidates' responses it was observed that some changed the order in which the numbers were presented in the problem and this resulted in them getting wrong answers: The working was presented as shown below:

0.83	7.40
-7.40	-8.30
7.43	1.10

These candidates lacked the importance of number alignment in basic operations, they did demonstrate their understanding of subtraction in a wrong alignment and avoided to demonstrate application of regrouping of numbers when subtracting.

The correct answer was

$$\begin{array}{r} 7.40 \\ -0.83 \\ \hline 6.57 \end{array}$$

(b) Candidates in this question were expected to add mixed numbers: $4\frac{4}{11} + 2\frac{2}{11}$. An above average performance was observed in this question. Most of them preferred converting the mixed numbers to improper fractions before adding hence their answers was written as $\frac{72}{11}$. The common error which was identified in wrong responses was with adding numerators and denominators so the popular wrong answers were written as $6\frac{6}{22}$ or $\frac{72}{22}$.

The correct answer was $6\frac{6}{11}$ or $\frac{72}{11}$.

(c) The question expected candidates to work out 1.35 ÷ 1000. The performance in this question was below average. From their responses it was observed that they tried to work out the problem using long division method which is difficult to apply when dividing numbers by powers of 10. The method they used made them to get wrong answers such as 0.135, 0.000035, 0.000013,……

The correct answer was 0.00135.

(d) Candidates were required to work out 56 × 23. Their responses in this question showed an average performance on the concept of finding the product of two digit numbers. Some common errors identified were:

- Failure to get the second partial product when multiplying by the 2-Tens and forgetting to write the zero as a place holder.
- Adding the two partial product with wrong place value alignment resulting in getting a wrong final answer.

  It should be noted that candidates demonstrated a proper understanding of multiplication algorithm.

  The correct answer was 1288.

Question 23

(a) This was a data handling and interpretation question expecting candidates to interpret a given key in a histogram. In this question, a majority of candidates performed very well.

Answer:

(a) **(i)** Sprinting

(ii) Javelin

(iii) 14 leaners

(b) **(i)** The question expected candidates to name the children who got the same number of marbles. Like in **(a)** above most of the candidates were able to name the children who got the same number of marbles.

Answer: Busi, Peter and Anele

(ii) Candidates were expected to calculate the sector angle of the marbles which were given to Thabo. A majority of candidates did demonstrate their ability to calculate sector angles. However, it was observed that some candidates showed a confusion of angles and percentages.

This was seen in responses such as: $\frac{20}{100} \times 100\%$, $\frac{20}{360} \times 100\%$, $\frac{100}{20} \times 360$ and $\frac{20}{100} \times 180$.

The answer was 72^o.

Question 24

(a) In this question candidates were expected to name types of angles marked in a given diagram. A majority of candidates performed very well in this task. Those who wrote wrong responses confused names of angles with names of plane shapes. Their wrong answers were: Equilateral, Isosceles, Scalene triangle. Wrong names of angles were also noted. These were: outside angle, inner angle, exterior angle and interior angle.

Answer:

(a) **(i)** Reflex angle

(ii) Acute angle

(iii) Obtuse angle

(b) Candidates were expected calculate a missing angle "*H*" in a given diagram applying their knowledge of 180^o as the size of the angle for a straight line. A majority of candidates responded correctly to this task. There are cases where the use of 180^o in calculating the missing angle was confused with 360^o. Another confusion observed was calculating the missing angle like finding a sector angle. In this case the identified cases were presented as: $\frac{35}{180} \times 360$

The correct answer was 55^o.

Question 25

(a) This question required candidates to interpret a word problem leading them in realising that to get an answer one had to find a difference between 60 *l* and 6.7 *l.* It was observed that a majority of candidates demonstrated a correct interpretation of the word problem by subtracting the two numbers. Those who failed to write correct answers had a challenge in aligning the place values.

The correct answer was 53.30 *l*.

(b) This question was testing candidates' knowledge of converting kilograms to grams. From their interpretation of the word problem candidates realised to work out the problem they should use same units as a result they changed kilograms to grams and it was very easy for them to subtract 200 *g* from 2000 *g.* It is worth mentioning that there are candidates who subtracted without converting to same units, hence responses such as 200 *g* – 2 kg = 198 *g* were seen.

The correct answer was 1800 *g* or 1.8 *kg*.

Question 26

(a) The question was testing candidates' knowledge of calculating simple interest when money is deposited over a certain period of time. Candidates' performance in this question was below average. There were wrong computations showing a misunderstanding interest calculation.

The wrong working was presented in the following manner:

$\frac{20000 \times 100}{16}$, $\frac{16}{12} \times 20\,000$, $\frac{16}{360} \times 20000$, 20 000 × 12, 20 000 + 16 and 20 000 – 16.

The correct answer was E3200.

(b) This was a word problem involving money, they were tested on their skills of interpretation and applying the correct strategies in solving the problem. When solving the problem it was observed that they failed to align the digits according to their place values and this resulted in getting wrong answers to the problem.

The correct answer was E86.05.

Question 27

(a) Mrs Sibandze is a typist. She can type 9 pages in 27 minutes using her laptop. Find the time she takes to type 1 page.

A majority of candidates performed very well in this question. They realised that to get the solution one had to divide 27 by 9. Those who did not understand the question responded by multiplying 27 by 9. The correct answer was 3 minutes.

(b) Calculate the number of pages she types in 54 minutes.

Like in (a) above, candidates correctly responded to this question. However, there are those who misunderstood the question and responded by adding 18 and 18.

The correct answer was18 minutes.

Question 28

In this question candidates were expected to calculate the area of a given rectangle by counting the number of squares in the rectangle. The task proved to be very easy for a majority of candidates as they were able to find the correct answer. It was noted that few candidates confused the area concept with volume. This was seen in responses of some candidates who multiplied three numbers.

The correct answer was 28 cm^2.

Question 29

(a) Siphiwe worked for 7 days in July. Nompumelelo worked for 5 days in August. They were paid at the same rate per day. Together they were paid E1440.

How much money did Siphiwe get?

This was a problem solving question, most candidates demonstrated their understanding of the question by responding accordingly. However, there are cases where candidates multiplied 7 by E1440 instead of first adding 7 and 5 for both Simphiwe and Nompumelelo. Others did add 7 and 5 and divided the E1440, but did not multiply by the 7 days worked by Simphiwe.

The correct answer was Siphiwe: E 840.

(b) In a furniture shop some tables have 3 legs and others have 4 legs.

The total number of legs for these tables is 29.

Find the number of three and four legged tables in the furniture shop.

Like in **(a)** this was a problem solving question where candidates were expected to apply their strategies of solving non-routine problems. This question proved to be challenging for a majority of candidates. It was noted that the popular strategy that was used by candidates was the trial and error method. This was seen by the different answers which were given by candidates. These answers also showed that there was a misunderstanding of the question. In some cases it was noted that candidates realised that to get a solution to the problem the concept of multiples of 3 and 4 had to be applied. A popular answer which showed a misunderstanding of the question was: "9 legged tables; 20 legged tables".

The correct answer was *3 three legged table*; *5 four legged table and 7 three legged table*;

2 four legged table.

Question 30

In this question candidates were expected to draw the reflection of an L-shape which was presented on a grid. This question proved to be very easy as a majority of candidates managed to draw the image after reflection. The few candidates who failed to draw the image enlarged the shape.

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GENERAL COMMENTS

The performance of the candidates was average in this paper. The candidates lost marks due to failure to show all necessary working. In some centres, the candidates wrote their working using pencil which they later erased. In addition, most candidates lost marks due to poor arithmetic skills as they failed to use the four basic operations correctly. For instance, most candidates failed to add correctly 22+29 + 36. On another note it was pleasing to note that a majority of the candidates demonstrated comprehension of the questions.

Overall, most candidates performed well in Questions **1**, **6**, **9(a)**, **11(a)**, **13** and **14(a)**. Question **10** was the most challenging in this paper. This question was examining the candidates' problem solving skills. Unlike in previous years where candidates performed extremely well in problem solving, in this paper very few candidates attempted correctly questions on problem solving. Other challenging questions in this paper included Questions **4(b)**, **14(c)** and **15**.

Comments on Specific Questions

Question 1

Most candidates were able to subtract E78012 from E150000 to get the amount of money Yakhe needed to buy the car as expected. The following responses were seen among some candidates,150 000 + 78 012 and 78 012−150 000. The correct answer was *71 988*.

Question 2

(a) In this item the candidates were required to work out $\frac{2}{3}-\frac{2}{5}$. Most candidates got this item correct. Common errors were, *multiplying the numerator and denominator* $\frac{2\times 2}{3\times 5}$, *adding the given fractions* $\frac{2}{3}+\frac{2}{5}=\frac{10+6}{15}$ and *subtracting both the numerator and denominator* $\frac{2-2}{3-5}=\frac{0}{2}$. The correct answer was $\frac{4}{15}$.

(b) In this item the candidates were expected to work out $\frac{3}{7}\times\frac{1}{3}$. A majority of the candidates worked out this item correctly. However, a few lost marks due to failure to simplify their final answer hence they wrote $\frac{3}{21}$. Isolated cases were witnessed where some of the candidates added the fractions as shown $\frac{(3\times 3)+(7\times 1)}{21}=\frac{63}{21}$.

The correct answer was $\frac{1}{7}$.

Question 3

(a) This item required candidates to calculate 40% of 120 cows. A majority of the candidates did well in this item. The following errors were seen amongst the candidates $\frac{40\times 100}{120}$

120− 40 and $\frac{120}{40}$.

The correct answer was *48 cows.*

(b) The candidates were expected to calculate Sabelo's new salary after it has been increased by 30% from E12 500. Most candidates were able to find 30% of E12 000. Some of the candidates presented the increment as their final answer. Others errors among the candidates were $\frac{40\times 100}{12500}$, E12 500 +30 and E12 500 – E3 750. The correct answer was *E16 250*.

(c) Question 4

(a) In this item, the candidates were required to find the number of pencils when the bag is full given that when is $\frac{2}{3}$ full it has 20 pencils. This task was challenging for a majority of the candidates. A common error in this item was $\frac{2}{3}\times 20$.

The correct answer 30 pencils.

(b) The candidates were expected to determine the time in a day when Phola and Thuli will take their medication if they had both taken their medication at 6.00 am. Phola takes his medication every 8 hours whilst Thuli takes her medication every 4 hours. A majority of the candidates failed to find the correct time whilst others found the correct time using methods which were not clear. For instance 8 hours – 600 am = 2 pm and 600 am – 4 hours = 2 pm. The correct answer was 2.00 pm or 1400hours.

Question 5

(a) In this item the candidates were instructed to mark *B* on the given line such that *AB* = 5 cm. Only a few candidates were able to follow the instruction and had *AB* = 5 cm. However, some had a *B* at the end of the line and another *B* at 5 cm from *A*. Some of the candidates ignored the given line and drew their own 5 cm line.

(b) The candidates were instructed to use *AB* as a radius and *A* as a centre to draw a circle. Most candidates were able follow this instruction and drew the circle correctly. Some of the candidates used the given line as their radius as a result they had a bigger circle.

(c) In this item, the candidates were required to draw angle *BAC* = 80° with *C* on the top half of the circumference. A majority of the candidates drew the angle correctly. Some of the weak candidates used a wrong scale in their protectors hence their angle 100°. Others marked *C* on the circumference of their protector not on the circumference of the circle.

(d) Few candidates were able to draw angle *ABD*=70° and *D* on the top half of the circumference as required in this item.

(e) The candidates were instructed to join *C* to *D* in this item. A majority of the candidates joined *C* to *D* correctly.

(f) In this item the candidates were required to name the resulting figure. Most candidates named the resulting quadrilateral as a trapezium which was incorrect. The correct answer was kite.

(g) Most candidates were able to measure *CD* as required. The correct answer was 3.5 cm ± 0.2 cm.

Question 6

(a) In this item the candidates were expected to state the activity which consumed the less number of units. Almost all the candidates got the correct answer which was charging cell phones. A few amongst the weak candidates wrote the number of units instead of the activity. The answer was charging cell phones.

(b) This item required the candidates to calculate the total number of units consumed by cooking, television, and refrigerating in the boarding school. Almost all the candidates got the correct answer which was 5819 as required. A few lost marks due to poor arithmetic errors in the addition. A negligible number added the units for all the activities. The correct answer was 5 819 units.

(c) In this item, the candidates were required to calculate the number of units used for cooking in August. They were told that in august the boarding school used $\frac{3}{5}$ of the number of units compared to June. The common wrong response in this item was $\frac{3}{5} - 4500$ and $\frac{3}{5} \div 4500$. Some candidates lost marks by failing to put the decimal point at the correct place, hence they wrote 27 000 as their final answer. The correct answer was 2 700 units.

Question 7

In this item the candidates were asked to calculate the number sheep the farmer had at the beginning of the year when given that they had increased by 2 times by the end of the year to 3440. A majority of the candidates calculated the number of sheep correctly. A few lost marks due to arithmetic errors in the division. Some of the weak candidates were dividing by 12 instead of 2 as they were confused by the year whilst others used wrong operation signs such as multiplication, subtraction and addition. A few omitted the last 0 and wrote 172 as their answer. The correct answer was 1720 sheep.

Question 8

(a) In this item the candidates were expected to find the length of fence Mr Buthelezi needed in order to fence his rectangular plot. The candidates were told that on one side of the plot no fence was required because there was a brick wall. A diagram was provided to illustrate this information. The most common error in this item was that the candidates were finding the area of the plot instead of the perimeter. In addition, some of the weak candidates were finding the perimeter of the plot yet one side had a brick wall, therefore no fencing was required. The correct answer was 140 m.

(b) This item required the candidates to determine the cost of fencing the plot when given the information that the fence cost E99 per metre. It was heartening to note that a majority of the candidates were aware that they were supposed to multiply E99 by their answer in **(a)**. Consequently, they were able to get a mark for the correct method. The correct answer was E13 860.

Question 9

(a) **(i)** In this item the candidates were required to change 100 minutes into hours and minutes.
Most candidates did well in this item. A majority of the weak candidates multiplied 100 minutes by 60 whilst some worked out this item like this $\frac{100}{60} = \frac{10}{6} = 1\,\text{h}\ 4\,\text{min}$. The correct answer was1 hour 40 minutes.

(ii) In this item the candidates were expected to calculate the time Tata arrived in Manzini if he left Siteki at 2.17 pm and took 100 minutes. Most of the weak candidates changed the 1 hour 40 minutes into 1340 h then added to it 2.17 pm. Some subtracted 1. 40 from 2.17 pm. The correct answer was 3.57 pm or 1557 hours.

(b) **(i)** The candidates were required to calculate the number of hours Ruth worked in 14 days given that she worked 5 hours per day. Most candidates were able to multiply 14 days by 5 as expected. A common error amongst the weak candidates was subtracting 60 minutes from the 70 hours. The correct answer was 70 hours.

(ii) The candidates were told that Ruth was paid E35 per hour and were asked to work out the amount she earned in 14 days. This item was done fairly. Some of the weak candidates were multiplying E35 x 14 days as they failed to discern that in the 14 days Ruth has worked 70 hours. The correct answer was E2 450.

Question 10

This question was challenging for most candidates. The candidates were given a table showing charges for renting a van at Quick Car Hire.

(a) In this item the candidates were asked to find the cost of renting a van at Quick Car Hire for 6 days. A majority of the candidates failed to find the correct amount. Some of the weak candidates added E300 to the amount for 4 days. The correct answer was E5 100.

(b) This item was difficult for a majority of the candidates. The candidates were required to calculate the number of days Mr Dlamini can rent a van at Quick Car Hire if he had E9 900. Most candidates failed to work out the required number of days. Some worked out their answers partially, for instance; E9 900 – E300 and E9900 ÷ E800. The correct answer was 12 days.

(c) Another challenging item for a majority of the candidates. A common wrong response among a majority of the weak candidates was add E500 +E300 or add E800 to the cost. The correct answer was *number of days multiply by E800 then add E300*.

Question 11

In this question, the candidates were given the information that Miss Mabuza buys 15 kg of tea at a whole sale and puts it in packets each with 75 g.

(a) **(i)** In this item, the candidates were expected to change 15 kg into grams. This task was easy for a majority of the candidates. Amongst the candidates the following errors were common; 15 kg × 100 and 1000 × 15 = 6 000 g. The correct answer was 15 000 g.

(ii) The candidates were asked to calculate the number of packets Miss Mabuza got after repackaging her tea. Most candidates did fairly well in this item. However, the candidates worked out the item as follows;15 000 × 75 and *75g* × *15 kg*. The correct answer was 200 packets.

(b) In this item, the candidates were given the information that Miss Mabuza sold each packet for E95. They were required to determine the amount of money she get after selling all the packets. Most candidates were able to determine that in order to get the amount of money they had to multiply E95 by their response to **(a)(ii)** which earned them a mark. The correct answer was E19 000.

(c) In this item, the candidates were expected to work out Miss Mabuza's profit when given that she pays E12 000 for the 15 kg tea at the wholesale. The most common wrong

working among the weak candidates was E12000 × 15 kg. The correct answer was E7 000.

Question 12

In this question the candidates were given a pie chart showing the amount of time in percentages Paul spend on the following activities; Calling, Facebook, WhatsApp and Internet.

(a) This item asked the candidates to determine the amount of time in hours Paul spend on internet in a day. This item was fairly done by most candidates. Various incorrect responses were witnessed amongst the candidates. Some of the most common incorrect responses included the following; $\frac{25}{100}\times 60$, $\frac{25}{360}\times 100$ and $\frac{25}{360}\times 24$. The correct answer was 6 hours.

(b) This item was also fairly done by a majority of the candidates. In this item the candidates were expected to calculate the sector angle for the amount of time Paul spend on WhatsApp. The most common mistake amongst the weak candidates was $\frac{40}{100}\times 100$. Another error that was common among the candidates was using a protector to measure the sector angle yet it was clearly stated that the diagram was not to scale. The correct answer was 144°.

Question 13

In this question the candidates were given the information that a community held a tree planting campaign to prevent soil erosion. The community planted 22 trees on the first day, 29 trees on the second day and 36 trees on the third day.

(a) In this item, the candidates were expected to continue the sequence to determine the number of trees the community planted on the fourth day. Most candidates got this item correctly as they were able to add 7 to 36 to get 43 as required. However, some candidates failed to identify the rule for the sequence, as a result they got 42or 44. The correct answer was 43 trees.

(b) This item required the candidates to find the total number of trees the community planted in the first three days. Most candidates did identify the numbers to be added but failed to do the addition correctly, that is, a majority failed to regroup correctly hence getting responses such as 67, 77, 97 etc. The correct answer was 87 trees.

(c) Most candidates were able to recognise that the question required them to multiply 87 by 17.3 litres. Those who lost marks in this item was due to failure to put the decimal point

correctly in their answer. Some found the amount of water used in each day then found the total which was correct. Some of the weak candidates multiplied 17.3 litres by 3 days which was incorrect. The correct answer was 1505.1 litres.

Question 14

The candidates were presented with the information that a school trip organising committee counted the amount of money paid by the learners for an educational trip. Before counting the money the committee sorted the money according to the value of each note.

(a) In this item, the candidates were asked to complete the given table showing the total amount of money of each note. This item was attempted well by a majority of candidates. However, some candidates failed to complete the table after working out the amount for each value of note.

The correct answer was;

value of note	***No. of notes***	***Amount(E)***
E 10	*5*	*50*
E20	*8*	*160*
E50	*6*	*300*
E100	*13*	*1 300*
E200	*7*	*1 400*

(b) The candidates were asked to calculate the total amount of money collected by the committee. A majority of the candidates calculated correctly the total amount that was collected. However, some of the weak candidates omitted E50 that was done for them to the total amount hence they got E3160 as their final answer. Whilst others were adding the value of the notes given as a result they got E380. The correct answer was E3 210.

(c) In this item the candidates were informed that 30 learners paid for the trip and were asked to calculate the amount paid by each learner. This item was difficult for a majority of the candidates as most were multiplying E3210 by 30 instead of dividing. A few cases were witnessed where the weak candidates divided E3210 by 39 which was the sum of the notes. The correct answer was E107.

Question 15

This question was poorly done by most candidates.

(a) Most candidates failed to identify the horizontal line as required in this item. Even those who were able to identify the horizontal line failed to name it correctly giving responses such as *A* and *B, A, B, A* to *B, A-B.* The correct answer was *AB*.

(b) This item required the candidates to identify a pair of perpendicular lines in the diagram. A majority of the candidates failed to identify the pair of perpendicular lines. The most common wrong response was *PQ* and *NM*. The correct answer was *AB and PQ*.

(c) Most candidates did well in this item. They were able to subtract 107° from 180° as expected. Some cases were seen where the candidates worked the item as 360° – (90°+90°+107°). Some of the weak candidates seemed clueless of what was required of them in this item. The correct answer was 73°.

Question 16

(a) This item required the candidates to name the shape shown on the coordinate diagram. A majority of the candidates were able to name the shape correctly. A common challenge in this item was the correct spelling for trapezium. Some candidates named the shape either as rhombus or parallelogram. The correct answer was trapezium.

(b) **(i)** In this item the candidates were expected to describe fully the slide movement from quadrilateral *ABCD* to $A_1B_1C_1D_1$ when given the coordinates of A_1 as (11, 2). A majority of the candidates were able to describe the slide movement correctly. A few of the weak candidates described the slide movement as 1 right 1 up. Some described the slide movement as 1 up 8 right which was wrong. The correct answer was 8 right 1up.

(ii) The candidates were required to complete the image $A_1B_1C_1D_1$ after the slide movement. A majority of the candidates completed the image correctly. A few of the weak candidates drew the image after a reflection.

(c) In this item the candidates were expected to write the coordinates of the vertex C_1 of the image after the sliding. A majority of the candidates got this item correctly. However, some lost this mark for failing to use the correct notation for writing coordinates. They wrote 16, 6 without brackets. The correct answer was C_1 (16, 6).

(d) The candidates were required to reflect quadrilateral *ABCD* on the line CD and label the image as $A_2B_2C_2D_2$. This item was fairly done. A majority of the weak candidates reflected $A_1B_1C_1D_1$ instead of the original shape whilst some used the wrong line of reflection.