

RUYONZA RIVERSIDE SCHOOL

ASSESSMENT OF TERM 3 2024

S.2 MTC

Time:1 Hour and 45 minutes Only

INSTRUCTIONS

- 1. Attempt ANY three (3) items**

Read carefully a question before answering anything.

ITEM 1

A market vendor sells vegetables in one of the markets. One day she bought 8 packs of tomatoes each containing 10 tomatoes from a farmer. She sold 25% of the total number of packs before her longtime friend came to visit her and decided to take her out for coffee at a hotel. At the hotel, the friend ordered 2 cups of tea each costing five thousand one hundred shillings and 2 plates of food each at ugx 20,000. While enjoying the meal, her friend told her that he comes to the hotel gym every after 4 days and she decided to be coming there too every after a week to exercise. After the meal, her friend gave her ugx 20,000 for transport back to the market and on reaching the market, she found a sixth of the remaining packs of tomatoes damaged and could not be sold. She decided to re-pack the undamaged ones in new packs of five tomatoes.

TASK

- What percentage of the number of tomatoes got damaged?
- How many packs of fives did she get after repacking?
- After how many days will she meet her friend again at the hotel gym?
- How much money (in words) did her friend spend on the outing?

ITEM 2

Three students A, B and C represent their schools in the zonal athletics competitions. It was announced that the length of the sports field was 10 meters more than its width and had an area of 2000 square meters.

It was noticed that the students take the average of 60 seconds, 72 seconds and 96 seconds respectively to run around the field once if they start at the same time. They were running 25 raps to complete

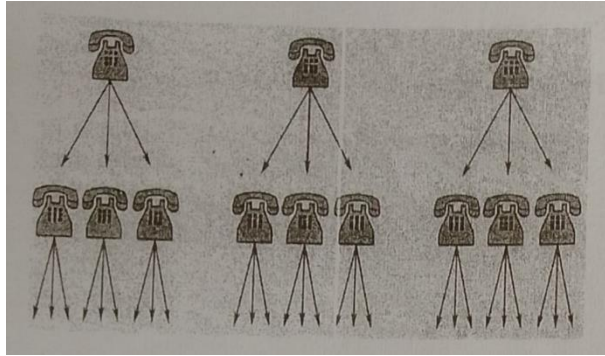
TASK

As a mathematics student: find out

- The time taken by a winning athlete to make 25 rounds in the sports field if he was using an average speed of 9 m/s.
- How long will it take the students to be together again at the starting point if they are to run more than one round.

ITEM 3

On Monday, the birthday girl rang three friends and invited them to her party. Each was told to invite three friends the next day and tell them to continue the process. Telephone communications for Monday and Tuesday are shown (see support) and Sunday was the last day on which people were invited.



One of the friends bought gifts and wanted to wrap them. She was advised to make a box out of a cardboard measuring 40cm by 30cm by cutting equal squares from four corners and bind up the sides. However, she finds it challenging to determine the best size of squares to cut so that her gifts just occupy 936cm^2 of complete box.

Task.

As a mathematics student,

- Estimate the total number of people likely to attend the party on Sunday.
- Advise the friend on how best to wrap the gift using the cardboard.

ITEM 4

The census in Uganda is held every after 10 years. It was held in 2014 and then previously 2004. The census in 2024 has revealed that there are 14,400 people in your village. This had increased by 60% as revealed by census 2014 having been previously increased by 80% earlier in 2004. The enumerator claims for transport refund every after four days, for the 4-day journey made in the exercise. He is refunded a certain amount on the first day, then half of that on the second day, third of that the third day and finally a quarter of that on the fourth day. The enumerator travelled a total distance of 50 k during the four-day exercise. Each kilometer travelled is paid UGX28,000. She was paid a total of UGX400000 less the actual amount and she never got certified with this money

Task

Help the enumerator to know;

- How many people were in the village in 2004
- How much she was to receive for each day of exercise.
- What percentage decrease of her earning in the exercise.

ITEM 5

At District football Competition held this year in Isingiro district, 16 schools appeared for the Competition and this called for Organizing team to consider group stages first because the turnout was big hence it grouped these schools in small groups each of four teams and applied knocking out method in order for strong teams to go to the next level.

Points scored by each team were added and presented as follows

9	7	4	8
12	7	9	10
9	8	10	9
7	9	8	8

In Order to qualify for the next level, Quarter finals, it was announced earlier before any game went that qualifying out in was not by being knocked out in group stages rather qualifying to the next level was by either a team emerges with number of points got by most teams or higher than that.

One of the invited guests never interpreted the above data and requested if the organizing committee would give him graphical representation for easy interpretation number of teams that would be considered for the next level, quarter finals.

The Committee got stuck about the request.

TASK

- Help the team in Organizing the above information using a tally chart for easy interpretation.
- Use you tally chart to present data on a bar graph and use to find the number of teams that managed it to the next level.
- As a student of Senior One, should schools always participate in these games? Give reasons for your answer.

END