



THE AMBASSADORS SCHOOLS, OTA

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STAGE 2 - WRITTEN TEST

TIME ALLOWED: 50 minutes

INSTRUCTIONS

1. This paper consists of 4 theory questions.
2. You are to answer all the questions in this paper.
3. This paper is worth 40 marks.
4. Please ensure that you show all necessary workings before arriving at your final answer.
5. Orderliness, neatness and clarity are encouraged.
6. The marks obtained in this paper will count count in the Grand Finale for qualified contestants.

INSTRUCTIONS: *There are four (4) questions in this paper.*

Answer all questions in this paper.

This paper is worth 40 marks

Show all your workings in this section clearly, neatly and orderly.

1. One-fifth of the chairs in a classroom are in working order. If three additional working chairs are brought in, there are 19 working seats available. How many chairs were originally in the room?

(6 marks)

2. (a) Simplify:

$$\left(4 - 2\frac{2}{3}\right)^4 \times \left(2\frac{1}{6} - \frac{8}{15} \div \frac{4}{5}\right)^3$$

leaving your answer in index form

- (b) Find the value of x in:

$$\frac{4x - 1}{3x + 1} = \frac{2}{3} \times 1\frac{1}{2}$$

(12 marks)

3. The average age of 8 pupils in class is 12 years. When two pupils of the same age are removed from the class, the average age drops to 11 years. How old is one of the pupils that was removed?

(8 marks)

4. The picture below shows the rectangular floor plan of the first level of a house. Both the bathroom and the kitchen are squares with areas of $4m^2$ and $64m^2$, respectively. The dining room is rectangular with an area of $96m^2$.



- (a) What is the area of the foyer?
- (b) The entire floor in the first level of the building is to be tiled with rectangular tiles measuring 50cm by 25cm, with each tile costing ₦400.00. How much would it cost to tile the entire floor?

(14 marks)