S.1 HOLIDAY MATH TEST

Duration:2 hours

Instructions: Attempt all questions.

ITEM 1

.In a village,the ages of four siblings Peter, Prima, Aron and Amina were found written as 10010_{two},111_{three},24_{five}and24_{seven} years respectively.They were requested by the chairman LC1,to rewrite their ages in a simpler way.(a)Using the knowledge of bases,help the chairman to identify from the four siblings,the youngest one. (10marks)

(b). Oscar bought 30 heaps of green pepper, each heap with 8 green pepper from the local market.

i. What is the number of green pepper in base eight.

ii. If Oscar sold each green pepper in another market at ugx.3000, how much money did he earn.(5 marks).

ITEM 2

A ship carrying merchandises starts from port A and proceeds to port B on a bearing of 120º. Port A is 40km from port B.

(a). Using a scale of 1cm to represent 5km, construct an accurate diagram of the journey of the ship

(b). State the bearing of A from B. (7 marks).

ITEM 3

Three bells ring at intervals of 15minutes ,18minutes and 30minutes. If the three bells begin by ringing together at 7:20am .

(a). After what length of time in hours will they ring together again.

(b). Find the time of the day when they will ring altogether again.

(ii). 5 is the number of times you can subtract 3 from 15 to get zero. Represent the numbers made on the number line. (8 marks).

ITEM 4

A ship sails 20km North East,then 18km south,and then stops.

(a). Draw the scale drawing to show the routes of the ship.

(b). How far is it from it's starting point when it stops ?

(c). On what bearing must it sail to return to it's starting point.

Hint

Using scale of 1cm for every 2km

ITEM 5.

Using a pair of compasses,ruler and pencil only, construct triangle ABC in which AB =10cm, <ABC =60º, and <CAB = 45º.

(a). Measure and state length AC and BC

(b). Circumscribe triangle ABC

(c). Measure and state the radius of the circle

(d). Calculate the area of the circle.

(e). Calculate the perimeter of the circle

Hint

Perimeter of circle P =2πr, where r = radius of circle, π = 22/7.

practice makes math easier

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