

# Mathematics - Maranda High School Form 1 End Term 1 2018

## MATHEMATICS

27<sup>TH</sup> MARCH 2018

2<sup>1</sup>/<sub>2</sub> HOURS

MARANDA HIGH SCHOOL END TERM 1 2018 EXAMINATION  
FORM ONE

### INSTRUCTIONS

- Answer all the questions
- Show all the steps in your calculations, giving your answers at each stage in the question.

- Write 10,303,030, 030 in words (1 mk)
  - Write one million, one hundred and eleven thousand, one hundred and eleven in words. (1 mk)
- Evaluate
  - $101001 - 9999 - 91002$  (1 mk)
  - $22365 - (33122 + 243)$  (2 mks)
- What is the place value of the digit 6 in the number 1.00061? (1 mk)
  - Find the sum of the total value of the digits 0 and 9 in the number 60391 (3 mks)
- Test whether 907272 is divisible by
  - 6 (3mks)
  - 11 (2mks)
- Round off the following to the nearest place values indicate in the brackets.
  - 40501 (thousands) (1 mk)
  - 89947 (hundreds) (1 mk)
  - 29.3405 (tenths) (1 mk)
- Find GCD of 32, 48 and 96 (3 mks)
- A company packs 50 pens in a packet. Sixteen such packets fill one carton. The company donated one full carton to a school with 240 pupils and 12 teachers. If each pupil received 2 pens and each teacher received nine pens, how many pens were left over? (3 mks)
- Find the value of
 
$$1\frac{1}{4} \text{ of } \frac{1}{2} + \frac{7}{8} \div 3 - 1\frac{1}{8} \times \frac{1}{6}$$

(3 mks)
- Three clocks were set to ring at intervals as follow: the first after every 6 minutes. The second after every 15 minutes and the third after every 24 minutes. If the clocks were set at the same time, after how many minutes did they ring at the same time together? (3 mks)
- At the beginning of year 2012, there were 800 pupils in a school of whom 55% were boys. At the end of the year the number of girls had increased by 20% and that of boys had decreased by 10%. What was the total number of pupils in the school at the end of the year? (3 mks)
- The height of an isosceles triangle is 4cm. Each of the two equal sides measures 5cm. What is the area of the triangle. (4 mks)
- William transported the following food items to the market:
  - 3 bags of maize each weighing 114.6kg.
  - 2 bags of potatoes each weighing 130 kg.

- 3 bags of cabbage each weighing 126.2 kg  
2 bags of carrots each weighing 137.7 kg.

What was the weight of the items in tonnes? (4 mks)

13.

- a. Arrange the following numbers in descending order: 0.3401, 0.3041, 0.3014, 0.3104. (1 mk)

b. Evaluate 
$$\frac{1.2 \times 4 - 4.8 \div 3 + 0.02}{8.4 \div 0.7}$$

(3 mks)

14. A plot of land is in the shape of a right angled triangle. The length of the longest side measures 26 metres while one of the shorter sides measures 10 metres. What is the area of the plot in square metres? (4 mks)

15. Given that  $a=3$ ,  $b=5$  and  $c = \frac{1}{3}$ . Find the value of  $2a + 3b + \frac{1}{3}a^2$  (2mks)

16. The mean of six numbers is  $4\frac{2}{3}$ . Five of these numbers are 5,3,7,8 and 3. What is the median of the six numbers? (3 mks)

17.

- a. Express  $\frac{2n-3}{3} + \frac{2n}{5}$  as a single fraction (2 mks)

- b. Use your expression in (i) above to solve the equation

$$\frac{2n-3}{3} + \frac{2n}{5} = 3 \quad (2 \text{ mks})$$

18. The table below shows the train fares for Nairobi and Mombasa route.

	1st Class	2nd Class
Adults and children above 11 years	4550	3780
Children between 3-11 years	3150	2400
Children under 3 years	Free	Free

The following passengers travelled in the train; 23 pupils of age 12 years and above. 12 pupils aged between 7 and 10 years, 2 children below 3 years, 3 parents, 5 teachers and 1 head teacher. The passengers occupied the following classes in the train; 1<sup>st</sup> Class: Head teacher and parent; 2<sup>nd</sup> class: all the teachers, all the pupils and the remaining parents.

- Calculate the amount of money paid for those who travelled in 1<sup>st</sup> class (3 mks)
- Calculate the amount of money paid for those who travelled in 2<sup>nd</sup> class. (3mks)
- Calculate how much the school could have saved if everyone travelled in 2<sup>nd</sup> class. (4mks)

19.

- Write the decimal 1.05 as a fraction in simplified form. (2 mks)
- In a school farm, the ratio of goats to cows to sheep is 5:8:2. There are 180 animals in the farm.
  - Find the number of each type of animal in the school farm (3 mks)
  - During drought,  $\frac{1}{4}$  of the cows,  $\frac{1}{3}$  of the goats and  $\frac{1}{15}$  died. How many animals remained in the farm? (3 mks)

20. The circumference of the cross section of a cylindrical juice container is 176 cm and its height is 40cm.

- What is the radius of container? (3 mks)
- The container was filled with juice and packed in small packets of capacity 0.28 litres. How