

**PRIME MINISTER'S OFFICE, REGIONAL ADMINISTRATION AND LOCAL
GOVERNMENT**

FORM ONE HOMEPAGE QUESTIONS

MATHEMATICS

A. Short Answer Questions

1. What is a set?
2. Define a natural number.
3. Mention the first five whole numbers.
4. What is an integer?
5. Give two examples of negative integers.
6. What is a rational number?
7. Give two examples of irrational numbers.
8. What is a fraction?
9. Differentiate between a proper fraction and an improper fraction.
10. Simplify: $18/24$.
11. Find the LCM of 12 and 18.
12. Find the HCF of 24 and 36.
13. What is a ratio?
14. Simplify the ratio 15:25.
15. What is a percentage?
16. Convert 0.75 into a percentage.
17. Convert 35% into a decimal.
18. What is an algebraic expression?
19. Simplify: $3x + 5x - 2x$.
20. Expand: $4(x + 3)$.
21. Factorise: $6x + 12$.
22. Solve: $2x + 5 = 15$.
23. What is a linear equation?
24. Define a variable.

25. What is a coordinate plane?

B. Competence-Based Questions

26. A shopkeeper has 240 exercise books and wants to pack them equally into 12 boxes. How many exercise books will be placed in each box?
27. A school has 144 boys and 96 girls. The head teacher wants to divide them into the largest possible equal groups with the same number of boys and girls in each group. Find the number of groups.
28. A farmer has 36 kg of maize and 48 kg of beans. He wants to pack each type into bags of equal size without any remainder. What is the largest possible size of each bag?
29. A student spends $\frac{3}{8}$ of his money on books and $\frac{1}{4}$ on food. What fraction of the money remains?
30. A water tank is $\frac{3}{5}$ full. If the tank has a capacity of 500 litres, how many litres of water are in the tank?
31. A school has 800 students. If 45% are girls, calculate the number of boys.
32. A shirt costs Tsh 40,000 and is sold at a discount of 15%. Calculate the discount and the new selling price.
33. A farmer harvested 250 bags of maize last year and 300 bags this year. Calculate the percentage increase in production.
34. A map uses a scale of 1:100,000. If two villages are 7 cm apart on the map, calculate their actual distance in kilometres.
35. A father shares Tsh 120,000 among his three children in the ratio 2:3:5. Calculate the amount received by each child.
36. A class has boys and girls in the ratio 3:2. If there are 30 boys, find the number of girls and the total number of students.
37. A student buys 4 pens at Tsh 1,500 each and 3 exercise books at Tsh 2,000 each. Calculate the total amount spent.
38. A taxi charges a fixed fare of Tsh 2,000 plus Tsh 500 for every kilometre travelled. Write an algebraic expression for the fare for x kilometres.
39. A farmer has x chickens and buys 15 more. Write an algebraic expression for the total number of chickens.
40. A school buys 8 boxes of chalk, each containing x pieces. If 12 pieces are used, write an expression for the number of pieces remaining.
41. A rectangular garden has a length of $(x + 5)$ metres and a width of x metres. Write an expression for its perimeter.

42. A student has twice as many books as another student. If the second student has x books, write an expression for the number of books the first student has.
43. A trader buys an item for Tsh 50,000 and sells it for Tsh 65,000. Calculate the profit and the percentage profit.
44. A student scored 18 marks out of 25 in Mathematics. Calculate the student's percentage score.
45. A water pipe fills a tank at a rate of 15 litres per minute. How many litres will it deliver in 40 minutes?
46. A rectangular classroom is 12 metres long and 8 metres wide. Calculate its area and perimeter.
47. A farmer wants to fence a rectangular field measuring 25 metres by 18 metres. Calculate the total length of fencing material required.
48. A student plots the points A(2,3), B(6,3), C(6,7) and D(2,7) on a coordinate plane. What shape is formed? Give a reason for your answer.
49. A straight road passes through the points (2,4) and (6,12). Calculate the gradient of the road.
50. A school plans to spend Tsh 600,000 on Mathematics textbooks. Each textbook costs Tsh 15,000. How many textbooks can the school buy, and how much money will remain?