KAMPALA JUNIOR ACADEMY SCHOOLS

MATHEMATICS TOPICAL QUESTIONS FOR P.7 TERM 1 2020 NO. 1

Name: ……..stream: ……..

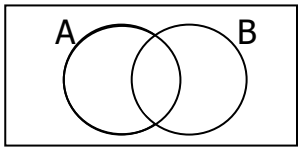
TOPIC 1: SETS

1. Given that A = {b, d, f, h} and B = {a, b, c, d, e} List the elements of A∪B.

2. If M = {2, 3, 4, 5}, how many subsets does set M have?

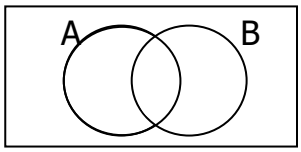
3. A set has 31 proper subsets, how many elements does the set have?

4. Shade the region that represents B′.



5. Given that ε = {1, 2, 3, 4, 5, 6, 7} A = {2, 4, 6} B = {4, 5, 6, 7}

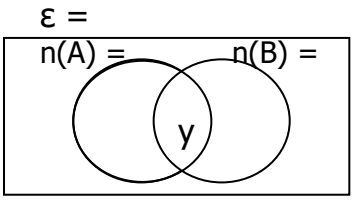
   (a) Represent the above information on the venn diagram.



   (b) Find (A∪B)′

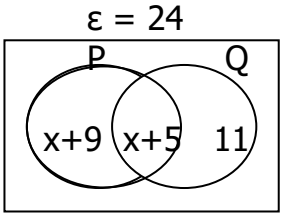
6. Given that n(A) = 25, n(B) = 20 and n(A∪B) = 35

(a) Represent the above information on a venn diagram.



(b) Find n(A∩B)

7. Use the venn diagram below correctly given that n(ε) = 24.

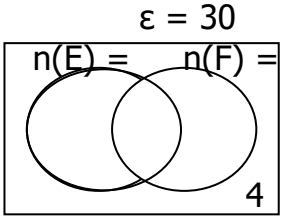


(a) Find the value of x.

(b) Find the number of elements in P.

8. In a class of 30 pupils who learn English and French, y pupils like English only, 10 like both English and French, 17 like French and 4 do not like the two languages.

(a) Represent this information on a venn diagram.



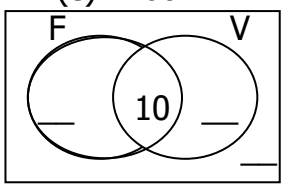
(b) How many pupils like English only?

(c) If a pupil chosen at random to be a class prefect, what is the probability of choosing one who likes only one language?

9. In a class of 60 pupils at Bombo Army P.S who took part in different games and sports activities, 30 pupils took part in Football (F), y pupils took part in Volleyball (V) only, 10 pupils took part in both games and 2y pupils took part in neither of the two games.

(a) Use the information given above to complete the venn diagram below.

n(ε) = 60

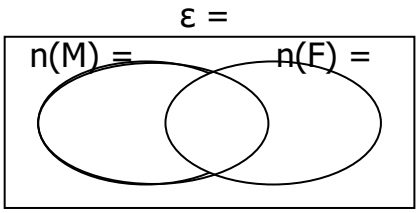


(b) Find the value of y.

(c) How many pupils took part in neither football nor volleyball?

10. In a class party of 2x guests, 19 ate meat, 13 ate fish, 9 ate both but x guests did not eat any of these two.

(a) Represent the above information on a venn diagram.



(b) Find the probability of choosing at random a guest who did not eat any of the two types of food.

KAMPALA JUNIOR ACADEMY-KITANTE

MATHEMATICS TOPICAL QUESTIONS FOR P.7 TERM 1 2020 NO. 2

Name: ……..stream: ……..

TOPIC 2: WHOLE NUMBERS

1. What is the place value of 3 in the number 3 5 6 4?

2. Write 111,111 in words.

3. Write 'Four hundred four thousand forty four' in figures.

4. Convert XCIV to Hindu Arabic numerals.

5. My father was born in MCMLXXV and my mother was born in MCMLXXXIX. Find the difference between their ages in Hindu Arabic numerals.

6. Express 409 in Roman numerals.

7. What is the place value of 0 in the number 203_{four}?

8. Change 23_{four} to base ten.

9. Express 52 in base three.

10. Change 201_{four} to base three.

11. Subtract: 344_{five} from 401_{five}

12. Find the value of x.
    $211_x = 112_{four}$

13. How many hands and fingers are needed to count 48?

14. Find the difference between the value of 3 and the place value of 4 in the number 73946.

15. Multiply: $101_{two} \times 11_{two}$.

16. Given the digits 5, 0 and 3.
    (a) Form the smallest three digit numeral from the given numerals.

    (b) Find the difference between the largest and smallest numeral formed.

17. Round off the following.

    (a) 23456 to the nearest hundreds.

    (b) 456.27 to the nearest whole number.

18. Write the following in standard form (scientific notation)

    (a) 500

    (b) 30.45

    (c) 0.00204

19. Write the number whose scientific notation is;

    (a) 6.45×10^{3}

    (b) 3.9×10^{-2}

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MATHEMATICS TOPICAL QUESTIONS FOR P.7 TERM 1 2020 NO. 3

Name: ……..stream: ……..

TOPIC 3: OPERATIONS ON WHOLE NUMBERS

1. Divide 3636 by 9

2. Use distributive property to work out the following.
   (a) (48 x 2.5) + (2.5 x 52)

   (b) (16 ÷ 5) + (3 ÷ 5)

3. A taxi carries 14 passengers while a bus carries 29 passengers. If the two vehicles make three journeys each, how many passengers will they carry altogether?

4. Given that; p * y = py + 8
   Evaluate: (i) 3 * 4

   (ii) 6 * 8

5. Workout: 4 + 6 ÷ 2

6. Workout the square roots of the following numbers.
   (a) 196

   (b) 1.44

   (c) $5\frac{4}{9}$

7. Solve the following
   (a) $2^x = 32$

   (b) $3^y \div 3 = 81$

   (c) $5^n \times 5^n = 25$

8. Simplify the following
   (a) $4^2 \times 4^3 \div 4^4$

   (b) $a^6 \times a^2 \div a^3$

9. The area of a square is $144m^2$. Find its perimeter.

10. Find the expanded number.
$(2 \times 10^2) + (3 \times 10^1) + (7 \times 10^{-1}) + (4 \times 10^{-2})$

11. The water metre reading at the beginning of the month was 234689 units and at the end of the month was 234788 units.
    (a) Find the number of units used during the month.

    (b) If each unit cost shs. 500, how much money would be paid at the end of the month?

12. A farmer collects 15600 eggs a day on her farm and packs them on trays of 30 eggs each. Her vehicle carries 40 trays per trip to the market. How many trips will the vehicle make in order to transport all the days eggs?

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MATHEMATICS TOPICAL QUESTIONS FOR P.7 TERM 1 2020 NO. 4

Name: ……..stream: ……..

TOPIC 4: PATTERNS AND SEQUENCES

1. Which of the following numbers are divisible by 11?
   2367, 814, 6425, 7282, 1001, 901938

2. Find the next number in the sequence.
   (a) 2, 3, 5, 7, _____

   (b) 1, 3, 6, 10, 15, ____

3. The sum of three consecutive odd numbers is 87.
   (a) Find the numbers.

   (b) Workout their range

4. What is the smallest number when divided by either 8 or 9 leaves remainder 5?

5. The GCF of two numbers is 6 and their LCM is 72. If one number is 24, find the other number.

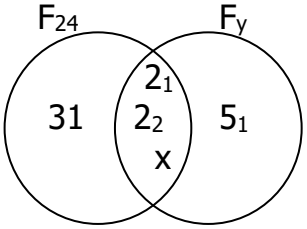
6. What is the lowest common multiple of 6, 8 and 9?

7. Find the missing numbers.
   4, 6, 8, 9, ____

8. What is the product of the first and fifth even number?

9. Workout the cube root of 64.

10. Use the venn diagram below correctly.



(a) Find the value of;
(i) X

(ii) Y

(b) Find the GCF of 24 and y.

(c) Workout their LCM

11. At Kampala bus park, buses travelling to Arua and Mbarara leave after every 40 minutes and 50 minutes respectively. The first buses to the two towns leaves together at 6:00 a.m.
At what time will the buses to the two towns leave Kampala together again?

12. Three bells are rung at intervals of 1 hour, 45 minutes and 30 minutes respectively. All the three bells were rung at 9:00 a.m.
(a) After how many minutes will the three bells be rung together again?

(b) At what time will the three bells be rung together again?

13. (a) The Lowest Common Multiple (LCM) of two numbers is 84 and their Greatest Common Factor (GCF) is 7. If one of the numbers is 14, find the second number.

(b) Prime factorise 639 and give your answer in set notation.