**MATHEMATHEMATICS ACTIVITIES FOR S5**

**1**.Simply the following expression

**a)**  **b**) 

**c**) 

**2**. Angle A is an acute angle and , angle B is obtuse and 

Find an exact expression for : **a)** 

**b)** calculate the value of **x** if 

**3.** construct a circuit of the following statements and explain the observation

**a)** 

**b)** 

**4. i)** show that  and  are logical equivalent and justify your answer

**ii**) How do we call this tautology ?

**5. i)** Write down the Cayley table for addition Modulo 5 on the set 

Or 

**ii)** Verify if  Cayley table in ( bi) above is a commutative group

**6.** Express the following in symbolic form and then draw it truth table.

“ if you go to the market, you will need money and you will be able to buy any thing”.

**7.** construct the truth table of this statement



**8.**  prove that : **a)** 

**b)** 

**c)** hence express  in surd form

**9.** Mutesi stand on the bank of river and observes that the angle subtended by a tree on the opposite the bank is, when she retreats from the bank she finds the angle to be 

Find the height of the tree and the breath of the river

**10**. In the set is defined the binary law “ \*” by 

a) Evaluate i)  ii) 

b) is the law \* commutative ,associative ?

c) Find The real number x such that : 

**11.** two side of triangle have lengths 25cm and 40cm respectively .the measure of their

included angle is , find the length of the opposite  approximately

**12. a)** convert the following degree :

**i)**  to radians **iii)** 250 grad to radians

**ii)**  to grades **iv)**  to degrees

**b)** convert from  to  system

**c)** convert from  to decimal degrees

**d)** define the word “ complementary angle”

**13.** The distance from point A to the top of the hill is .the angle of elevation from A to the base of the tower is and the angle of elevation from A to the top of the tower is .

2

tower

hill

1 



  

1. find the measures of angles 1 and 2
2. find the height of the tower

14.Solve: a)

15.A ray of light is incident through glass with refractive index 1.5 , on an interface separating glass and water with refractive index 1.32.what is the angle of refraction if the angle of incident of the ray in glass is

16.Given that 24,, are three consecutive terms of an arithmetic progression , find the values of and the numerical value of the fourth term for each value of found.

17. The product of three consecutive numbers in geometric progression is 27. The sum of the first two and nine times the third is -79. Find the numbers.

18.Insert 6 geometric means between 1 and - .

19.Find the general solution of

20.Solve for : a)

b)

c)

21.A man deposits 800,000frw his savings account on which interest is 15% per annum.If he makes no withdrawals ,after how many years will his balance exceed 8millions frw?

22.The end points of a straight line are given by .Extrapolate the value of

23.If and , Find a)

24.Consider the following linear transformation defined on by .Determine its matrix relative to the basis

25.The heights (in meters) of six children are 1.42,1.35,1.37,1.50,1.38 and 1.30. Calculate the mean height and the standard deviation of the heights.

**GOOD-LUCK!!!!!!!!!!**