digital circuits session number two 2023

task number one

consider the following numbers

- ninteen
- thirty three
- sixty nine
- four hundreds

try to represent the said numbers using the unsigned binary system

task number two

consider the unsigned binary number 10101001

try to represent the said number in the following numeric systems

- decimal
- hexadecimal

task number three

consider a four bits unsigned binary system

try to do the following operations

0011x0011

0011x0101

0111x0010

task number four

try to represent one hundred in the numberic systems which use the following bases 9,7,5,3 and two

task number five

consider the numeric systems which use the following bases 3,5,7 and nine

let each of the said systems use three digits

how many patterns might get represented by each of the said numeric systems?

task number six

consider the following numeric systems

eight bits unsigned binary system

sixteen bits unsigned binary system

thirty two bits unsigned binary system

sixty four bits unsigned binary system

try to determine the range of values that might get represented by each of the said systems

task number seven

consider the following set {0,16,32,64}

how many bits might get needed to represent the elements of the said set using binary patterns?