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The XOR or Exclusive OR Gate is a special type of logic gate used in digital electronics to perform the exclusive OR operation. This gate takes two inputs and produces an output depending on the combination of the two inputs applied. This logic gate produces a high or logic 1 output when both of the inputs are dissimilar, otherwise, it produces a logic 0 output.Operation of XOR GateWe can explain the operation of the XOR gate as follows>Returns 1, if the number of logical high input is odd>Returns 0, if number of logical high input is even.Say we have two inputs, A and B and the output is called X, then the expression is:The Boolean expression of XOR Gate is as follows: $X = A \oplus B$ 'Symbol of XOR GateThe logic symbol of XOR gate is shown in the following figure. In this figure, the variables A and B represent the input lines and 'A ⊕ B' represent the output of the XOR gate.Symbol of XOR GateTruth Table of XOR GateThe truth table of an XOR gate is given below. This table shows the relationship between inputs and output of the XOR gate. This also provides information about the operation of XOR gate for different input combinations.Truth Table of XOR GateConstruction of XOR Gate Using TransistorWe can implement exclusive OR gate using transistor. Here is the circuit showing the connection of different circuit elements that are combined to implement the XOR operation.XOR Gate using NPN TransistorWorking of the CircuitWe will understand this circuit with the help of different scenarios of input in case of 2 input XOR gate:CASE I: When both the inputs are zero. (A=0, B=0)When both the inputs A and B are zero then transistors Q1,Q2,Q4 and Q5 are open circuit so the LED will not glow because both Q4 and Q5 are open so the negative pin of LED is not connected to the ground. CASE II: When one input if logical high and other is logical low (A=1, B=0)In this case we can easily see that Q4 is working as close circuit now. So the negative pin of the LED is connected to Q3 via Q4 and ultimately which is connected to ground so in this case LED will glow.CASE III - When one input if logical high and other is logical low (A=0, B=1)In this case we can easily see that Q5 is working as close circuit now. So the negative pin of the LED is connected to Q3 via Q5 and ultimately which is connected to ground so in this case LED will glow.CASE IV - When both the inputs are logical high. (A=1, B=1)In this case when both A and B are logical high then transistor Q1 and Q2 are also activated then the current will directly go from +5V junction to ground through Q1 and Q2 transistors, and will not go in the path where Q3 is connected as a result transistor Q3 will now act as open circuit and ultimately negative pin of LED is disconnected from ground so the LED will not glow.XOR GATE Implementation using NAND GATEExpression of XOR gate:  $A \cdot B + \bar{A} \cdot \bar{B}$ To Convert the expression into NAND form perform the following:Apply double complement:  $\overline{\overline{A \cdot B + \bar{A} \cdot \bar{B}}}$ Operate internal complement:  $\overline{(\bar{A} \cdot B) + (A \cdot \bar{B})}$  [ (A.B) . (A.B) ]Now, expression is obtained in NAND form.Pass Input A through the first NAND Gate to get A, now pass this A and B through the second NAND Gate to get (A.B). Similarly, pass Input B through the third NAND Gate to get B, now pass this B and A through the fourth NAND Gate to get (A.B). Pass both the output (A.B) and (A.B) through the fifth NAND Gate to get our desired expression of XOR Gate (A.B).(A.B) = AB + AB (By De-Morgans Law).Logic DiagramThe Logical Diagram of the Following Expression is shown below XOR Gate from NAND GateXOR GATE Implementation using NOR GATETo implement XOR gate from NOR gate we follow below stepsFirst, we connect both the inputs in NOR gate resulting in (A + B).Then, after we have another two NOR gates with the inputs A, (A + B) and B, (A + B) respectively with outputs [A + (A + B)] and [B + (A + B)].Again, the connect outputs of the above NOR gates to next NOR gate resulting in the output [AB + AB].Now, the result is generated in complement form so, we connect the result as the input for last NOR gate which gives the output [AB + AB].The resultant of the last NOR gate gives us XOR gate.So, the number of NOR gates required to implement XOR gate is 5.below is the logic diagram for implementation of XOR gate from NOR gate:Implementation of XOR GateUsing NOR GateThree Input XOR GATEIt's important to understand that there isn't a XOR gate with more than two input lines. XOR gates are typically designed with only two inputs. However, if we need an XOR gate with more than two inputs, we can create one by combining multiple two-input XOR gates. By connecting them in a specific way, we can achieve the functionality of an XOR gate with more inputs.The logic circuit diagram of the 3-input XOR gate is shown in the following figure. It has three input line denoted by the letter A, B, C and one output line denoted by the letter X where X=ABC. It can be obtained by using two 2-input XOR gates. First, perform the XOR operation on any two of the inputs. Then, XOR the result of that operation with the third input using the second XOR gate.3 -Input XOR GateThe Boolean expression of N input XOR Gate is as follows:Say we have N inputs, A0,A1,...,AN and the output is called X, the expression is: $X = A0 \oplus A1 \oplus \dots \oplus AN$ Truth Table of Three input XOR GateThe truth table of three input XOR gate is given below: Truth Table of 3-Input XOR GateThis table shows the relationship between three inputs and one output of the XOR gate. This also provides information about the operation of XOR gate for different input combinations.Say we have three inputs A,B and C and the output is called X, then the expression is: $X = A \oplus B \oplus C$ Applications of XOR GateHere are some of the applications of the XOR Gate:Data Encryption: XOR gates are used in data encryption algorithms. As it is used to combine data with secret key and scramble it making it very difficult for unauthorized people to crack.Comparator Circuits: It is used in comparator circuit to check if the two binary values are equal or not. As for same type of both the input it gives output 0 and for different inputs it gives output 1.Binary addition and subtraction: It helps in determining sum of each bit and also combine with other logic gates to handle borrow operations.Toggle Flip flops: In T flip flops it is used to the circuit that toggles with each clock pulse passed.Some other uses of XOR gates are in Address decoding, Security and access control, Random number generation, clock synchronization, frequency divider circuits etc.Advantages of XOR GateIt helps to detect if there are odd number of '1' in the sequence of inputs.XOR gates perform the exclusive OR operation, which is a fundamental operation in digital logic.Disadvantages of XOR GateXOR gate are complex gate circuit and upon connecting it to the circuit of our use, it causes increased power consumption and circuit complexity.It leads to increase in the propagation delay of the circuit.Upon increasing the number of inputs the circuit becomes more and more complex making it hard to maintain and detect errors.Solved Example of XOR GateFind a single number from a series of numbers given that every element appears twice except for that one single element.Solution: We know that XOR of two same bits gives '0' so here we can observe that if we XOR the elements then every elements which are occurring twice will become '0' and only remaining element would be our answer.Like out of {7,2,2,3,3,4,4,5,5,6,6}if we XOR each of the above elements then elements occurring even number of times will give '0' and elements occurring odd number of times will give the output. Ultimately we will get 7 as output as only this element is occurring once only and rest other elements are occurring even number of times. This IC, often found as 74LS86 or 74HC86, is a chip with four basic XOR gates. The XOR gate is a logic gate one of the most basic building blocks in digital electronics. The chip comes in a 14-pin package with the following pinout: In this guide, you're going to learn what the 7486 IC does and how to hook it up in a circuit. The 7486 gives you four basic XOR gates that can be used individually. An XOR gate is a logic gate that outputs 1 (HIGH) if its inputs are NOT equal (one input is 1 and the other one is 0). In the truth table below, you can see what the output will be for any given input: Truth table for the XOR gate Like every other chip in the 7400 series, this IC needs to be connected to power before you can use any of the XOR gates inside it. Most 7400 ICs support a VCC voltage of 5V. One difference between the HC and LS version of the chip is that the 74HC86 supports 2V to 6V, while the 74LS86 supports only 5V. Once its connected, you can use any of the four basic XOR gates inside. The 74HC86/74LS86 IC connected to power 74HC86:Each gate output of the 74HC86 can sink or source 4 mA when powered with 5V. 74LS86:HIGH-Level Output Current: 0.4 mALOW-Level Output Current: 8 mA The 7486 has 14 pins and contains four basic XOR gates laid out as shown in the pinout diagram below: This gadget lets you use any IR remote-control to control your lamp, garden lights, heater oven, garage door, or anything else. Pin NamePin #TypeDescriptionI1InputInput to the first XOR gate.I2InputInput to the first XOR gate.I3OutputOutput from the first XOR gate.I4InputInput to the second XOR gate.I5InputInput to the second XOR gate.I6OutputOutput from the second XOR gate.I7OutputOutput from the second XOR gate.I8InputInput to the third XOR gate.I9InputInput to the third XOR gate.I10InputInput to the third XOR gate.I11OutputOutput from the third XOR gate.I12InputInput to the fourth XOR gate.I13InputInput to the fourth XOR gate.I14OutputOutput from the fourth XOR gate.VCC1PowerPositive power supply. Connect to +5V power.Pin overview for the 7486 IC Here's a simple circuit you can build to test the XOR gates in the 7486 IC. The pull-down resistors pull both inputs to the XOR gate LOW when the buttons are not pushed. Push any of the buttons, and you'll make the input pin HIGH. A HIGH on one (and exclusively one) input will turn on the output and thereby turn on theLight-Emitting Diode (LED). If you push both buttons at the same time, the LED will not turn on. The LED will only turn on if you push one of the buttons and leave the other unpushed. To build this circuit, you'll need the following parts: 1 x 74HC86 1 x Light-Emitting Diode (LED) 2 x 10 k resistor (R1-R2) 1 x 1 k resistor (R3) 2 x pushbutton There are many versions of the 7486 chip. They all have the same functionality, but with different specifications such as supported voltages and maximum current output. Here's a list of a few equivalents of this chip: 74HC86 (High-speed CMOS) 74HCT86 (High-speed CMOS, TTL compatible) 74LS86 (High-speed TTL) 74LVCM86 (Low Voltage TTL) 74AC86 (Advanced CMOS) 74ALS86 (Advanced Low-Power Schottky TTL) 74F86 (Very High Speed) 74C86 (CMOS, similar to the 4000-series) Some manufacturers also add a prefix, such as the SN74HC86 and SN74LS86 by Texas Instruments. Can't find the 7486 anywhere? Then try one of the following IC alternatives: 74136 Quad 2-input XOR gates (with open-collector outputs). CD4030 Quad 2-input XOR gates. CD4070 Quad 2-input XOR gates. If you can't find the 7486 IC in your local electronics store, don't worry, you'll most likely find it in one of the stores listed on this page of online stores where you'll find components and tools for all your electronics projects. Download the PDF datasheet for your version of the 7486 here: Electronics is easy when you know what to focus on and what to ignore. Learn what "the basics" really is and how to learn it fast. Among the most essential logic gates is the XOR gate, short for Exclusive OR gate. The XOR gates unique behavior and logical operations make it a fundamental building block in various applications, including data encryption, error detection, and arithmetic operations. In this article, we will delve into the XOR gate truth table, XOR gate symbol, XOR gate circuit diagram, XOR gate pin diagram and more. Download XOR Gate Truth Table Notes PDF What is XOR Gate? The XOR gate is a digital logic gate that takes in two binary inputs and produces an output based on their logical relationship. It returns a HIGH output (usually represented as 1) if the number of HIGH inputs is odd, and a LOW output (usually represented as 0) if the number of HIGH inputs is even. The XOR gates output is TRUE only when its inputs differ, hence the term exclusive OR. XOR Gate Truth Table and XOR gate symbol Lets examine the XOR gate truth table: From the XOR gate truth table, we can observe that the XOR gate produces a HIGH output when the inputs A and B are different, and a LOW output when the inputs are the same. The XOR gate symbol is as follows: XOR Gate Expression  $Y = A \oplus B = A \oplus B$  XOR Gate Circuit Diagram In the XOR gate circuit diagram, Input A and Input B are the two input lines, and the output is represented by the Output line. The XOR gate is represented by the symbol XOR Gate in the diagram. The inputs in the XOR gate circuit diagram are connected to the XOR gate, which performs the XOR operation on the inputs and produces the output based on their logical relationship. The switching XOR gate circuit diagram is shown below: XOR Gate Pin Diagram The XOR gate is a logic gate with two input pins and one output pin. The XOR gate pin diagram is as follows: The inputs, A and B, are represented by two separate input pins, and the output is represented by the output pin in the XOR gate pin diagram. The XOR gate performs the logical XOR operation on the inputs and generates the output based on the logical relationship between the inputs. Applications of XOR Gate XOR Gate has the following applications: Data Encryption Error Detection and Correction Arithmetic Operations Digital Circuit Design Properties of XOR Gate Understanding the properties of XOR Gate is essential for understanding the working of XOR gates in various applications, including encryption, error detection, and arithmetic operations. Commutative Property: The XOR gate follows the commutative property, which means that the order of the inputs does not affect the output. In other words,  $K \oplus X \oplus L$  produces the same result as  $L \oplus X \oplus K$ . Example:  $K \oplus X \oplus L = L \oplus X \oplus K$ . Associative Property: The XOR gate also adheres to the associative property, implying that the grouping of inputs does not affect the final output. Thus,  $(K \oplus X) \oplus L$  is equivalent to  $K \oplus (X \oplus L)$ . Example:  $(K \oplus X) \oplus L = K \oplus (X \oplus L)$ . Self-Inverse Property: When both inputs of the XOR gate are the same (either both 0 or both 1), the output is always 0. Conversely, when the inputs are different, the output is always 1. This self-inverse property makes the XOR gate its own complement. Example:  $K \oplus X \oplus K = X$  Exclusive Operation: The XOR gate performs an exclusive operation, producing a TRUE output (1) only when the inputs differ. If both inputs are the same, the output is FALSE (0). Example:  $0 \oplus 0 = 0$ ,  $1 \oplus 0 = 1$ ,  $0 \oplus 1 = 1$ ,  $1 \oplus 1 = 0$  Bit Flipping: The XOR gate is often used for bit flipping. XORing a bit with 1 toggles its value, while XORing it with 0 keeps the value unchanged. Example:  $1 \oplus X \oplus 1 = 0$  (flips the bit),  $0 \oplus X \oplus 1 = 1$  (flips the bit),  $1 \oplus X \oplus 0 = 1$  (keeps the bit unchanged),  $0 \oplus X \oplus 0 = 0$  (keeps the bit unchanged) No Dependency on Input Order: The XOR gate does not depend on the order in which the inputs are given. The output remains the same regardless of whether A is the first input and B is the second input or vice versa. Example:  $K \oplus X \oplus L$  produces the same output as  $L \oplus X \oplus K$  Non-Associative Property with More Than Two Inputs: While the XOR gate follows the associative property with two inputs, it does not hold the associative property when extended to more than two inputs. The grouping of inputs can affect the final output. Example:  $(K \oplus X) \oplus L$  is not necessarily equal to  $K \oplus (X \oplus L)$  The XOR gate, with its distinct behavior and logical operations, is a vital component in digital logic. Its ability to produce a HIGH output only when the inputs differ makes it indispensable in various applications, including data encryption, error detection, and arithmetic operations. Understanding the principles and applications of the XOR gate is essential for anyone venturing into the fascinating world of digital electronics and computer science. As technology continues to evolve, the XOR gate remains an integral part of our increasingly interconnected world. The conditions for an XOR gate are that it outputs a true (1) only when the number of true inputs is odd, and false (0) otherwise.The logic behind an XOR gate is that it compares two inputs and outputs true if exactly one of the inputs is true, and false if both inputs are the same (either both true or both false).An XOR gate is not universal because it cannot be used to create all possible logic functions. It cannot replicate the behavior of AND or OR gates.An XOR gate has multiple inputs. It typically takes two or more inputs and compares them pairwise.The maximum XOR operator is not well-defined as it depends on the specific context and data type being used. In general, the XOR operation is performed on binary values, where the maximum XOR output is the result of XORing the largest possible binary values, where: N is the total number of possible combinations in AND Gates is the total number of input variables The OR Gate is a logic circuit which gives 1 output if any of the input is 1. If there are both inputs are 0 then the output will be 0. The OR gate performs the basic operation of addition as that multiplication in AND gate. The algebraic or mathematical expression for the output of the OR gate is given as Here, A and B denotes the inputs. The output is given by Y. The total number of possible combinations in the truth table is determined by the following formula: $N = 2^n$  where: N is the total number of possible combinations in AND Gates is the total number of input variables. The Logic Symbol for OR Gate InputInputOutputABY000011101111Truth Table for OR Gate NOT gate is the simplest logic circuit. It performs the inversion operation which means to make output state opposite to the input state i.e. if 1 is given as input, then 0 will be the output and if 0 is given as input, then 1 will be the output. Only two input combinations are possible in NOT gate. Either 0 or 1. Logic Symbol of NOT Gate Truth Table for NOT Gate The XOR Gate is not so common but it is very important and used in many applications. XOR Gate is also called as exclusive-OR gate.It has two or more input signals but one output signal. It is different from OR gate. XOR gate produces the output 1 only when the input combinations have odd number of 1. The output is 0 when there are even number of 1s in the input. The output is 1 when there are odd number of 1s in the input. It is written as  $Y = A \oplus B$  The logic Symbol for XOR gate is given below Logic Symbol of XOR Gate InputInputOutputABY001010100111Truth Table for XOR Gate NOR gate is a combination of NOT and OR gate. NOR gate is complement of OR gate. Output of NOR gate will be 1 only when all inputs are 0 and output will be 0 if any input represents a 1. The Logic Symbol of NOR Gate is given as Logic Symbol of XOR Gate InputInputOutputABY001010100111Truth Table for NOR gate The XNOR gate is the complement of the XOR gate. The output of the XNOR gate is 1 only when the logic values of both A and B is same i.e. either both are equal to 1 or both are 0. The XNOR output is 0 when its inputs are different. The Logic Symbol for XNOR Gate is Logic Symbol for XNOR Gate Truth Table for XNOR Gate InputInputOutputABY001010100111Truth Table for XNOR Gate A NAND gate has the two or more input signal but has only one output signal. The NAND gate is the complemented of the AND gate. The output of NAND gate will be 0 only when all inputs are 1 and output will be 0 if any input represents a 0. NAND is the short form of the NOT-AND. The Logic table for NAND gate is as below Logic Symbol for NAND Gate InputInputOutputABY00101010011101Truth Table for NAND Gate Logic Gates are defined as digital circuits that operates on one or more digital inputs and produces an one output signal. Logic gates are called digital circuits. Also read about Basic Electrical Tools Number of Inputs: 2 3 4 Select Logic Gate: AND OR NOT NAND NOR XOR The XOR Gate is a digital logic gate that outputs a high signal only when the input signals are different.A fun example of an XOR Gate would be a game show buzzer. If two contestants buzz in, only one of them, the rst to buzz, will activate the circuit. The other contestant will be locked out from buzzing.XOR Gates are commonly used in digital circuits to perform arithmetic and data processing operations.The XOR GateThe XOR module is a logic gate with two inputs and one output. The output of an XOR Gate is only HIGH (1) if either one, but not both, are high.In the case of a XOR gate with more than two inputs, most of the time, an XOR gate will output a high signal if an odd number of the inputs are high.The XOR is called the exclusive OR because it is similar to the OR gate, but it only outputs anHIGH if there is exclusively one input that is high. The XOR falls for projects in which the activation requires input alternation.\*Fyi, the following terms are used interchangeably | HIGH | ONO | LOW | OFFIn the truth table OR = 1 and OFF = 0. Lets show you what that looks like Truth Table of the XOR GateThe truth table of an XOR gate summarizes its behavior for all possible input combinations. The following table shows the truth table for a 2-input XOR gate:Here are some real world applications of the XOR Gate:Here's how we applied an XOR Gate to our book, Computer Engineering for Babies:Here are some other applications of the XOR Gate:Error detection and correction in digital data transmissionEncryption and decryption in security systemsGeneration of control signalsCreation of adders and subtractors in digital arithmetic circuitsNow that we know what they are used for, what are some of the different types?Different types of XOR GatesThere are several types of XOR gates, including the standard 2-input XOR gate, as well as gates with more than two inputs.2-Input XOR Gate3-Input XOR Gate: This type of XOR gate has three inputs and one output. The output is high if an odd number of inputs are high, and low if an even number of inputs are high.4-Input XOR Gate: This type of XOR gate has four inputs and one output. The output is high if an odd number of inputs are high, and low if an even number of inputs are high.eXclusive-Not-OR (XNOR Gate): This gate is sometimes referred to as the "equivalence" gate because its output is high if both inputs are the same (either both high or both low), and low if the inputs are different (one high and one low).Lets get into the advantages and disadvantages of using XOR Gates.Advantages of using XOR GatesXOR Gates are hugely versatile and can be combined with other logic gates to perform complex functions.They are relatively simple and inexpensive to manufacture, making them a cost-effective solution for digital circuits. In addition to being cost-effective, XOR Gates can operate at high speeds, making them ideal for use in high-speed digital data processing systems.Disadvantages of using XOR GatesThere are also some disadvantages to using XOR gates in digital circuits. One of the main disadvantages is that they can generate significant amounts of electromagnetic interference (EMI), which can cause errors and signal degradation in nearby circuits.The limited number of inputs can make them less suitable for certain types of digital processing applications that require more complex logic functions.There are many ways to use a Gate in Computer Science and relating fields, here's how the XOR Gate compares to the others.Comparing XOR with Other Logic GatesXOR gates have some similarities and differences when compared to other basic logic gates such as AND, OR, and NOT Gates.Similarities:Like other basic logic gates, XOR gates operate on digital input signals and produce digital output signals.XOR gates are constructed using transistors and other electronic components, just like other logic gates.Like other basic logic gates, XOR gates can be combined in various ways to perform more complex functions.Differences:Unlike AND Gates and OR Gates, which produce a high output signal when all or any of the input signals are high, XOR gates produce a high output signal only when the input signals are different.Unlike NOT gates, which have a single input and produce an inverted output signal, XOR gates can have multiple inputs and produce a non-inverted output signal.XOR gates have a limited number of inputs, while AND and OR gates can have any number of inputs.XOR gates can be more complex to design and troubleshoot than simpler logic gates, such as AND and OR gates.XOR gates have a tendency to generate electromagnetic interference (EMI), which can cause errors and signal degradation in nearby circuits.The XOR Gate in Digital Logic | Final thoughtsIn summary, XOR gates have a unique output characteristic. They are often used in combination with other logic gates to create logic circuits that perform complex operations. Other logic gates, such as OR gates and NOT gates, have different output characteristics and correspond to different Boolean operations.Did you notice the book images throughout this post? Thats our book, Computer Engineering for Babies, check it out! In this lecture, we are going to learn about the Logic of the XOR Gate in every detail. We will discuss what is XOR gate, the symbol of the XOR gate, the XOR gate truth table, the XOR gate boolean expression, 3 input xor gate truth table, IC 7486 XOR gate, 7486 ic datasheet So lets start with a basic understanding of the Logic NOR gate.XOR and XNOR gates are special-purpose gates. They can be used for applications such as half adder, full adder, and subtractor.These gates are also called derived gates.The XOR Gate is abbreviated as EX-OR gate or sometimes as Exclusive-OR gate.An XOR gate can have two or more two inputs terminals and one output terminal.The XOR gate symbol is shown in the figure below.The XOR Gate Truth Table is as shown in the figure below which shows that, when both the inputs are identical (A=B), the output is LOW (0) i.e., Y=0 for A=B=0 or A=B=1, and the output is HIGH (1) when AB.The Boolean expression of a xor gate is:
$$Y = \bar{A} B + A \bar{B}$$
 xor gate circuit diagram is shown in the below figure. We can make the XOR gate using the basic 2 AND Gate, 2 NOT Gate, and 1 OR Gate. There are 4 NAND Gates required to build the XOR Gate using NAND Gate. The logic diagram of the XOR Gate using the NAND gate is shown in the below image.XOR gates have more than two input and output areas available in the market.Symbols of such XOR gates and the truth table of 3-input XOR gate and 4-input XOR gate are shown in the figure below.This truth table shows that the output of the XOR gate is HIGH (1) if an odd number of inputs are HIGH (1).The Boolean expression for a 3-input XOR gate is:
$$Y = A \oplus B \oplus C$$
 The Boolean expression for a 4-input XOR gate is:
$$Y = A \oplus B \oplus C \oplus D$$
 }Note that during intervals, I, II, and V, the input voltages are identical i.e. A = B, therefore the output Y = 0 whereas during intervals III and IV, the input voltages are not identical i.e. A ≠ B, therefore the output voltage Y = 1.This shows that the XOR gate obeys the truth table even for the pulsed operation.IC 7486 is the standard packaging of the XOR gate. It consists of four two-input XOR gates.The IC 7486 Pin Diagram is shown in the figure below:7486 IC Datasheet:Click HereSome of the applications of XOR gates are as follows:As a magnitude Comparator.In the binary-to-gray code converter:used in adder and subtractor circuits.In the parity generator:as a modulo-2 adder.The Boolean expression of a xor gate is:  $Y = \bar{A} B + A \bar{B}$  IC 7486 is used for xor logic gate.The simplest XOR gate is a two-input digital circuit that outputs a logical 1 if the two input values differ, i.e., its output is a logical 1 if either of its inputs are 1, but not at the same time (exclusively).Click To know about some More Gates

#### 4 input xor truth table. Xor truth table 3 input. 4 input xnor gate truth table. Xor gate truth table explanation. Explain xor gate with truth table. What is xor gate truth table.

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