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CIS313 Week 2 Worksheet

You must show your work in details when answering Q1-Q8 . You will lose 50% of the grade if you didn’t show your work.

1. What base 10 number is the same as the binary number 11011001? \_\_\_217\_\_

A close up of text on a white surface

Description automatically generated

1. What base 10 number is the same as the binary number 100001? \_\_33\_\_\_

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Description automatically generated

1. What base 10 number is the same as the binary number 1100001111? \_\_783\_\_\_

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Description automatically generated

1. What binary number is the same as the base 10 number 78? \_\_1001110\_\_\_

A close up of text on a whiteboard

Description automatically generated

1. What binary number is the same as the base 10 number 974? \_111100111\_\_\_\_

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Description automatically generated

1. What binary number is the same as the base 10 number 1024? \_\_10000000000\_\_\_

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1. Convert the binary number 111111011011 into –
   1. hexadecimal: \_FDB\_\_\_\_
   2. decimal: \_\_4059\_\_\_

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1. Convert the binary number 111110011 into:
   1. hexadecimal: \_\_1F3\_\_\_
   2. decimal:\_\_499\_\_\_

A close up of text on a whiteboard

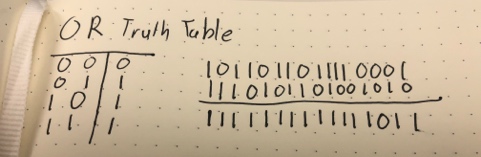
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1. Use the logical operator AND on the following:

1011011011110001

1110101101001010

1111111111111011



1. Use the logical operator OR on the following:

1011011011110001

1110101101001010

1111111111111011

A picture containing object

Description automatically generated

1. Use the logical operator XOR on the following:

1011011011110001

1110101101001010

0101110110111011

A picture containing wall, hanging

Description automatically generated

1. Find at least two applications for converting numbers among binary, decimal, and hexadecimal, and list them, or the sites from which they originate.

<https://coolconversion.com/math/binary-octal-hexa-decimal/>

Unix command line utility bc. (Included some examples.)

