1. Figure out what decimal value is represented by the following binary number 0011 1010 0011
2. Represent the decimal value 517 as a binary number.
3. The binary number system is base 2 and has 2 digits. The decimal number system is base 10 and has 10 digits. The octal system is base 8. How many digits does it have? What are they, starting at 0?
4. Each student that enrolls at a school is assigned a unique ID number, which is stored as a binary number. The ID numbers increase sequentially by 1 with each newly enrolled student. If the ID number assigned to the last student who enrolled was the binary number 1001 0011, what binary number will be assigned to the next student who enrolls? What number will be assigned to the 10th student after the number 1001 0011 is assigned?

**Portfolio Reflection Questions**

**Make a copy** of this document in your Portfolio Assignments folder and answer these questions in the spaces below. Once complete, turn in this assignment according to the steps given by your teacher.

[2.9 Binary Numbers Curriculum Page](https://course.mobilecsp.org/mobilecsp/unit?unit=1&lesson=63)

Answer the following questions:

1. Figure out what decimal value is represented by the following binary number 0011 1010 0011

**Answer**

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2. Represent the decimal value 517 as a binary number.

**Answer**

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3. The binary number system is base 2 and has 2 digits. The decimal number system is base 10 and has 10 digits. The octal system is base 8. How many digits does it have? What are they, starting at 0?

**Answer**

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4. Each student that enrolls at a school is assigned a unique ID number, which is stored as a binary number. The ID numbers increase sequentially by 1 with each newly enrolled student. If the ID number assigned to the last student who enrolled was the binary number 1001 0011, what binary number will be assigned to the next student who enrolls? What number will be assigned to the 10th student after the number 1001 0011 is assigned?

**Answer**

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