

Module 1A: Number bases and base conversion

MTH 225
4 Sept 2020

Agenda

- Review of Daily Prep activity + Q/A time
- Minilecture: Converting from decimal to binary, octal, and hexadecimal the hard way and the easy way
- Activity: Practicing with the base conversion algorithm
- Discussion: Why does the algorithm work?
- Wrap up with ungraded quiz + feedback time

An "integer" is...

A positive whole number **A**

A whole number that is either positive or zero **B**

Any whole number (positive, negative, or zero) **C**

Any number at all **D**



To 0

The standard way we humans write integers uses

Base 2

Base 8

Base 10

Base 12

Base 16

Base 26



To 0

An integer written in binary looks like

A string of 0's and 1's

A string of 0's, 1's and 2's

A string of 0's and 2's

A string consisting of 0, 1, 2, 3, 4, 5, 6, or 7's

None of the above



To 0

The binary integer 0110, when converted to decimal, is

3

4

6

10

110



To 0

The hexadecimal integer 1A, when converted to decimal, is

1

11

17

21

26

16A



To 0

Q&A time

Minilecture and Class Activities

- Minilecture:
https://jamboard.google.com/d/1ugFH9MYV0lpIxo_Nm1PQZ-i9Lo5mGEGuJl1zWCtU2bQ/edit?usp=sharing
- Class activities for students participating synchronously:
<https://jamboard.google.com/d/1TUmSxp683bGymBkl4VTNwEebOBwuKUgbzLYVZjhHFvQ/edit?usp=sharing>
- Class activities for students participating asynchronously:
<https://app.classkick.com/#/login/MRJWDJ>

The decimal number 16, in binary, is

100

1000

1111

10000

11111



To 0

The decimal number 25, in octal, is

16

21

27

31

56



To 0

(DAD JOKE ALERT) Why did the computer scientist get Christmas and Halloween confused?



Feedback:

<http://gvsu.edu/s/1rF>

Add sticky notes for
comments, ideas, and
questions.

Next

- Early completion incentive for Startup Assignment: TODAY 11:59pm Eastern
- NO CLASS Monday due to Labor Day
- Class Activities from today: Due 11:59pm Eastern, Tuesday September 8
- Daily Prep for Module 1B: Due 11:59pm Eastern, Tuesday September 8
- Startup Assignment deadline: 11:59pm Eastern, Friday September 11