

Activity: Octal and Hex Numbers

A. Why?

Octal and hexadecimal numbers are a convenient way to abbreviate binary numbers

B. Outcomes

After this activity you should

- Know how to convert between binary and octal/hexadecimal numbers.
- Know how to convert between decimal and octal/hexadecimal numbers.

C. Questions

(As usual, in your groups)

1. What octal number does (unsigned) binary 1011011 represent?
2. What hexadecimal number does (unsigned) binary 1011011 represent?
3. What (unsigned) binary number does octal 101 represent?
4. What (unsigned) binary number does hexadecimal AEF represent?
5. Let “2’s complement hex AEF” mean “the bit pattern represented by hex AEF, read as a 2’s complement binary number.” What is the negative of (2’s complement) hex AEF?
(Write your answer in binary and in hex.)