1. Without converting to base-10, add the binary numbers 10110001111\(_2\) and 1101010010\(_2\).

2. Without converting to base-10, multiply the numbers 1011\(_2\) and 110\(_2\).

3. Convert the numbers above to base-10 and check your results.

4. Represent the numbers 104 and \(−36\) in 8-bit two's complement notation. Add these representations (ignoring overflow), then convert the result back to base-10. Check your answer (it should be 68).