

CSC 3501 Computer Organization and Design
Solution of Homework #4

Chapter 4. Review, please refer the textbook.

- 4.
- 5.
- 9.
- 15.
- 24.
- 26

Chapter 4. Exercises

- 4.
 - a. There are $4M \times 2$ bytes which equals $2^2 \times 2^{20} \times 2 = 2^{23}$ total bytes, so 23 bits are needed for an address
 - b. There are 4M words which equals $2^2 \times 2^{20} = 2^{22}$, so 22 bits are required for an address

- 8.
 - a. 8
 - b. 16
 - c. 2^{24}
 - d. $2^{24} - 1$

- 10.

Answer is e.