

CMSC 411 – Homework #8 – 11/20/2018

[20 points] What are three types of cache misses and their definitions?

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[20 points] Design a 256KB direct-mapped data cache that uses a 32-bit address and 8 words per block. Calculate the following:

(a) How many bits are used for the byte offset and why?

(b) How many bits are used for the set (index) field?

(c) How many bits are used for the tag?

[10 points] What are the following bits used for?

Valid: _____

Dirty : _____

Reference: _____

[10 points] What does TLB mean and what does it do?
