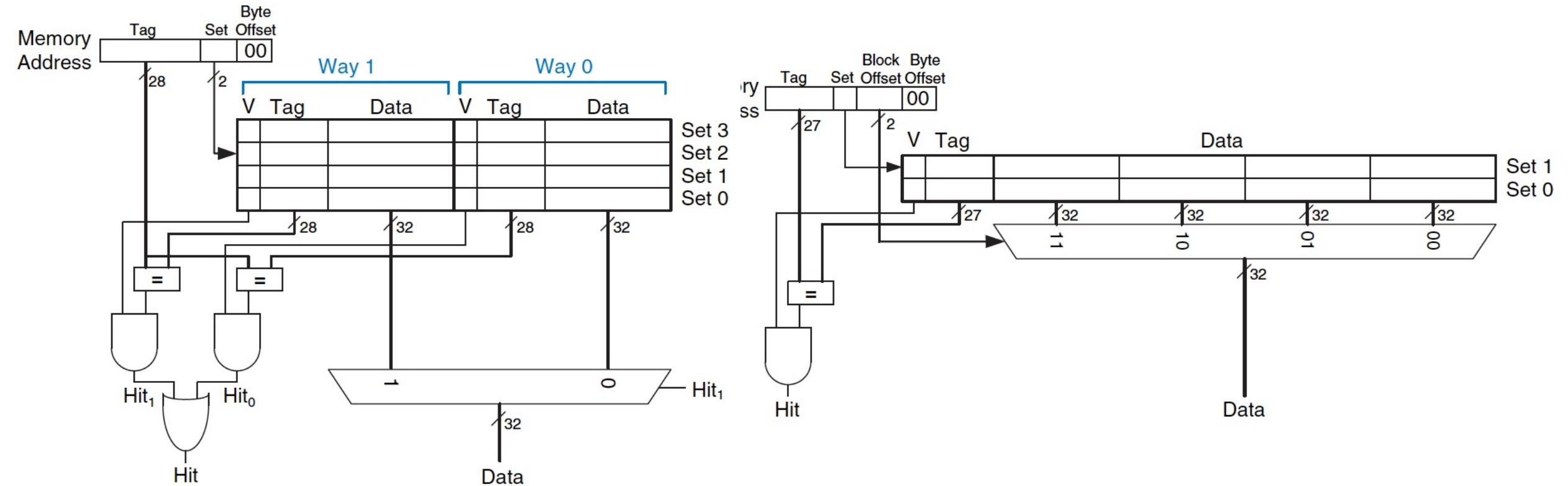


# Increased block size vs associativity



# Block Size Tradeoffs

Large block size will mean that a fixed-size cache will have fewer blocks.

- Increases conflicts, thus increasing the miss rate.

- Takes more time to fetch the missing block on a miss due to the additional data fetched.

- Time required for this is the miss penalty.

- If adjacent words in the block are not accessed later, effort to fetch is wasted.

Still generally beneficial to have larger block sizes

# Splitting up Addresses

- Cache capacity and block size  $\rightarrow$  # blocks
- # blocks and associativity  $\rightarrow$  # sets