

## Reducing Miss Rate

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- Large block size – reduces compulsory misses, reduces miss penalty in case of spatial locality – increases traffic between different levels, space waste, and conflict misses
- Large cache – reduces capacity/conflict misses – access time penalty
- High associativity – reduces conflict misses – rule of thumb:
  - 2-way cache of capacity  $N/2$  has the same miss rate as
  - 1-way cache of capacity  $N$  – more energy
  - 4-way 32KB 2-way 64KB 1-way