

***\*\*Below results are taken from addresses-2.txt.***

### **Changing Associativity – Same Cache and Block Size**

\*Cache Size = 512

\*Block Size = 4

#### **Random Replacement**

##### Associativity 1:

Number of misses: 543

Number of hits: 716

Number of write backs: 91

##### Associativity 2:

Number of misses: 487

Number of hits: 772

Number of write backs: 80

##### Associativity 4:

Number of misses: 444

Number of hits: 815

Number of write backs: 80

##### Associativity 8:

Number of misses: 436

Number of hits: 823

Number of write backs: 81

#### **LRU Replacement**

##### Associativity 1:

Number of misses: 543

Number of hits: 716

Number of write backs: 91

##### Associativity 2:

Number of misses: 465

Number of hits: 794

Number of write backs: 74

##### Associativity 4:

Number of misses: 434

Number of hits: 825

Number of write backs: 74

Associativity 8:

Number of misses: 423

Number of hits: 836

Number of write backs: 77

**Changing Cache Size – Same Associativity and Block Size**

\*Associativity = 8

\*Block Size = 4

**Random Replacement**

Cache Size 256:

Number of misses: 569

Number of hits: 690

Number of write backs: 145

Cache Size 512:

Number of misses: 447

Number of hits: 812

Number of write backs: 83

Cache Size 1024:

Number of misses: 399

Number of hits: 860

Number of write backs: 32

Cache Size 2048:

Number of misses: 367

Number of hits: 892

Number of write backs: 5

Cache Size 4096:

Number of misses: 364

Number of hits: 895

Number of write backs: 0

**LRU Replacement**

Cache Size 256:

Number of misses: 564

Number of hits: 695

Number of write backs: 146

Cache Size 512:

Number of misses: 430  
Number of hits: 829  
Number of write backs: 81

Cache Size 1024:

Number of misses: 392  
Number of hits: 867  
Number of write backs: 30

Cache Size 2048:

Number of misses: 371  
Number of hits: 888  
Number of write backs: 7

Cache Size 4096:

Number of misses: 365  
Number of hits: 894  
Number of write backs: 2

**Changing Cache Size – Same Associativity and Block Size**

\*Associativity = 4

\*Block Size = 4

**Random Replacement**

Cache Size 256:

Number of misses: 577  
Number of hits: 682  
Number of write backs: 142

Cache Size 512:

Number of misses: 462  
Number of hits: 797  
Number of write backs: 84

Cache Size 1024:

Number of misses: 395  
Number of hits: 864  
Number of write backs: 33

Cache Size 2048:

Number of misses: 370  
Number of hits: 889  
Number of write backs: 10

Cache Size 4096:

Number of misses: 366

Number of hits: 893

Number of write backs: 1

**LRU Replacement**

Cache Size 256:

Number of misses: 556

Number of hits: 703

Number of write backs: 137

Cache Size 512:

Number of misses: 435

Number of hits: 824

Number of write backs: 74

Cache Size 1024:

Number of misses: 389

Number of hits: 870

Number of write backs: 35

Cache Size 2048:

Number of misses: 369

Number of hits: 890

Number of write backs: 10

Cache Size 4096:

Number of misses: 365

Number of hits: 894

Number of write backs: 2

**Changing Block Size – Same Associativity and Cache Size**

\*Associativity = 4

\*Cache Size = 1024

**Random Replacement**

Block Size 4:

Number of misses: 401

Number of hits: 858

Number of write backs: 28

Block Size 8:

Number of misses: 467  
Number of hits: 792  
Number of write backs: 91

Block Size 16:

Number of misses: 636  
Number of hits: 623  
Number of write backs: 156

Block Size 32:

Number of misses: 810  
Number of hits: 449  
Number of write backs: 205

Block Size 64:

Number of misses: 1072  
Number of hits: 187  
Number of write backs: 239

**LRU Replacement**

Block Size 4:

Number of misses: 388  
Number of hits: 871  
Number of write backs: 33

Block Size 8:

Number of misses: 432  
Number of hits: 827  
Number of write backs: 77

Block Size 16:

Number of misses: 576  
Number of hits: 683  
Number of write backs: 144

Block Size 32:

Number of misses: 856  
Number of hits: 403  
Number of write backs: 207

Block Size 64:

Number of misses: 1111  
Number of hits: 148  
Number of write backs: 242

## **Changing Block Size – Same Associativity and Cache Size**

\*Associativity = 8

\*Cache Size = 1024

### **Random Replacement**

#### Block Size 4:

Number of misses: 395

Number of hits: 864

Number of write backs: 35

#### Block Size 8:

Number of misses: 455

Number of hits: 804

Number of write backs: 85

#### Block Size 16:

Number of misses: 544

Number of hits: 715

Number of write backs: 136

#### Block Size 32:

Number of misses: 824

Number of hits: 435

Number of write backs: 208

#### Block Size 64:

Number of misses: 1062

Number of hits: 197

Number of write backs: 236

### **LRU Replacement**

#### Block Size 4:

Number of misses: 389

Number of hits: 870

Number of write backs: 34

#### Block Size 8:

Number of misses: 426

Number of hits: 833

Number of write backs: 81

#### Block Size 16:

Number of misses: 547

Number of hits: 712

Number of write backs: 138

Block Size 32:

Number of misses: 810

Number of hits: 449

Number of write backs: 197

Block Size 64:

Number of misses: 1109

Number of hits: 150

Number of write backs: 242

***\*\*Below results are taken from addresses-4.txt.***

**Changing Block Size – Same Associativity and Cache Size**

\*Associativity = 4

\*Cache Size = 1024

**Random Replacement:**

Block Size 4:

Number of misses: 26

Number of hits: 158

Number of write backs: 0

Block Size 8:

Number of misses: 20

Number of hits: 164

Number of write backs: 0

Block Size 16:

Number of misses: 16

Number of hits: 168

Number of write backs: 0

**LRU Replacement:**

Block Size 4:

Number of misses: 26

Number of hits: 158

Number of write backs: 0

Block Size 8:

Number of misses: 20

Number of hits: 164

Number of write backs: 0

Block Size 16:

Number of misses: 16

Number of hits: 168

Number of write backs: 0