Here number of lines are 2^10/16=64 lines

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| RAM  address:  generated by  CPU | Block  number,  j=quotient  (address/bloc  k size) | Check  cache for  block j | Event | Consequence |
| 33 | j=33/16= 2 | Not found | Cache  miss | Block-2 of RAM is transferred into line-2  (i = 2 MOD 64 = 2) |
| 65 | j=65/16= 4 | Found in  Cache | Cache  Hit | CPU reads from cache  line-3 |
| 97 | j=97/16= 6 | Not found | Cache  miss | Block-6 of RAM is transferred into line-6  (i = 6 MOD 64 = 6) |
| 2080 | j=2080/16= 130 | Not found | Cache  miss | Block-130 of RAM is transferred into line-2  (i = 130 MOD 64 = 2) |
| 4160 | j=4160/16=260 | Not found | Cache  miss | Block-260 of RAM is transferred into line-4  (i = 260 MOD 64 = 4) |
| 1121 | j=1121/16= 70 | Not found | Cache  miss | Block-70of RAM is transferred into line-6  (i = 70 MOD 64 = 6) |
| 34 | j=34/16= 2 | Not found | Cache  miss | Block-2of RAM is transferred into line-6  (i = 2 MOD 64 = 2) |
| 4161 | j=4161/16= 260 | Not found | Cache  miss | Block-260 of RAM is transferred into line-2  (i = 260 MOD 64 = 2) |
| 98 | j=98/16= 6 | Not found | Cache  miss | Block-6 of RAM is transferred into line-2  (i = 6 MOD 64 = 2) |

1. Calculate the hit ratio= 1/9\*100=11.111%

**(iii)** 3 blocks are replaced.