

1. Spatial locality would be like washing dishes and putting them away in chronological stacks. Temporal locality would be to store the clean dishes in the dish cabinet for later, rather than storing them into the garage.

2. In the below code, accessing multiple elements within array 'a' is an example of Answer locality.

```
while (i < 10){  
    a[i] = a[i] + 3;  
    i = i + 1;  
}
```

3. In the below code, accessing $i = i + 1$ repeatedly is an example of Answer locality.

```
while (i < 10){  
    a[i] = a[i] + 3;  
    i = i + 1;  
}
```

4. The fraction of memory accesses found in a level of the memory hierarchy is termed as Answer rate.

5. The time required to fetch a block into a level of the memory hierarchy from the lower level is Answer .

MISS PENALTY

6. Expand DRAM.

Answer:

7. memory technology is used to implement the memory levels closest to the processor.

8. Memories in personal mobile devices are typically Answer **Flash Memory**

9. Data may exhibit spatial locality, but never temporal locality.

☐ False

10. Instructions may exhibit temporal locality, but never spatial locality.

☐ False