**1.)**

|  |  |  |
| --- | --- | --- |
| Block # | 17 | 18 |
| Next block | 18 | 0 |
|  | 4589 | 24353 |
|  | 43546 | 98745 |
|  | 718 | 76345 |
|  | 345 | 9877 |
|  | **A** | 7345 |
|  | **A** | 34535 |
|  | **A** | 154698 |
|  | **A** | 967 |
|  | **A** | 8657 |

**a)**

|  |  |  |
| --- | --- | --- |
| Block # | 17 | 18 |
| Next block | 18 | 0 |
|  | 4589 | 24353 |
|  | 43546 | 98745 |
|  | 718 | 76345 |
|  | 345 | 9877 |
|  | **22** | 7345 |
|  | - | 34535 |
|  | - | 154698 |
|  | - | 967 |
|  | - | 8657 |

**b)**

|  |  |  |
| --- | --- | --- |
| Block # | 17 | 18 |
| Next block | 18 | 0 |
|  | **A** | 24353 |
|  | **A** | 98745 |
|  | **A** | 76345 |
|  | **A** | 9877 |
|  | **A** | 7345 |
|  | - | 34535 |
|  | - | 154698 |
|  | - | 967 |
|  | - | 8657 |

**c)**

|  |  |  |
| --- | --- | --- |
| Block # | **A** | 18 |
| Next block | **A** | 0 |
|  | - | 24353 |
|  | - | 98745 |
|  | - | 76345 |
|  | - | 9877 |
|  | - | 7345 |
|  | - | 34535 |
|  | - | 154698 |
|  | - | 967 |
|  | - | **17** |

**d)**

|  |  |  |
| --- | --- | --- |
| Block # | - | 18 |
| Next block | - | 0 |
|  | - | 24353 |
|  | - | 98745 |
|  | - | 76345 |
|  | - | 9877 |
|  | - | 7345 |
|  | - | 34535 |
|  | - | **A** |
|  | - | **A** |
|  | - | **A** |

**e)**

|  |  |  |
| --- | --- | --- |
| Block # | **634634** | 18 |
| Next block | **18** | 0 |
|  | - | 24353 |
|  | - | 98745 |
|  | - | 76345 |
|  | - | 9877 |
|  | - | 7345 |
|  | - | 34535 |
|  | - | **23456** |
|  | - | **8345345** |
|  | - | **56** |

**f)**

**2.)**  
The linked list uses, more or less, less space than the bitmap, IF the drive has only around 30 GB (28, 990, 325, 760 bytes to be occupied) of free space left.