

1.
  - False
  - True
  - True
  - True

False

### Notes

– Hard link is a directory entry. Not inode.

- False
- False

True

### Notes

– Moe didn't see the word 'never result'

- False
- Omitted. Topic not covered in class

2. Omitted. Question not in scope of test

3. Omitted. Question not in scope of test

4. a)
  - 5
  - 36
  - 2
  - 3

### Correct Solution

- 5
  - 37 (36 inode and data blocks + 1 indirect block)
  - 2
  - 3
- b)
- the number of links in `emptydir` would change from 1 to 2
  - `emptydir`'s data block would add directory entry for `bdir`
  - `bdir` would have 1 data block of size 4 KiB
  - `bdir` would have link count of 2
  - `bdir`'s size field in inode is 4096
  - `bdir`'s data block would be ticked as allocated in data bitmap
  - `bdir`'s inode would be ticked as allocated in inode bitmap

- c)
- Data block (bdir)
    - Is done first so there won't be inconsistency when crash occurs
  - Inode bitmap (bdir)
  - Inode (emptydir)
    - Are done so multiple inodes won't be pointing to where the inode of bdir is
    - They minimize damage done to existing file system
  - Data bitmap (bdir)
  - Inode (bdir)
    - Are done so multiple inodes won't be pointing the same data block

### **Correct Solution**

- New inode for bdir
- New data block for bdir
- Modify inode for emptydir (links and last modified time)
- Modify data block for emptydir
- Update bitmaps for new inode and data block