1a) $2^{32} \cdot 2^{16} = 2^{16}$ pages $\cdot 4$ bytes =
$2^{18} = 256$ kb

1b) $\frac{2^{32}}{2^{16}} = 2^{16}$ 3rd level = $2^{16} \cdot 2^2 = 2^{18}$ $\frac{2^{18}}{2^6} = 2^2 \cdot 2^2 = 2^4$

$2^2 + 2^{18} = 2^{20} = 104857$ bytes

1c) 1111 1111 1111 1111 3rd level

2a) You cannot use the address bit on an inverted page table. **Zero**

b) $\frac{2^{30}}{65536} = 2^{14}$ $2^{14}(2^4) = 2^{18}$

total size = 2^{18}

c) $\frac{2^{64}}{2^{16}} = 2^{48}$ $48 - 14 = 34$ bits

d) $\frac{2^{64}}{2^{16}} = 2^{48}$

3a) It should be cachable. This is because it allows for locations of memory maps to be located.

b) When the last program exits.

c) Yes. The list needs to be implemented before it is shared. If it is shared too early, then both processes will not see the full list.