Let's calculate these values:

Number of blocks for the main file:

Total record size = 20000 * 150 bytes = 3,000,000 bytes

Number of blocks for main file = Total record size / Block size

= 3,000,000 bytes / 2048 bytes ≈ 1465 blocks

Primary Index:

Total size of primary index file = 20000 * 20 bytes = 400,000 bytes

Number of blocks for primary index = 400,000 bytes / 2048 bytes ≈ 195 blocks

Secondary Index:

Total size of secondary index file = 20000 * 20 bytes = 400,000 bytes

Number of blocks for secondary index = 400,000 bytes / 2048 bytes ≈ 195 blocks

Therefore:

Number of block accesses without an index = 1465 blocks

Number of block accesses with a primary index = 195 blocks

Number of block accesses with a secondary index = 195 blocks