a)

|  |  |  |  |
| --- | --- | --- | --- |
| X | Query Q1  Time (ms) | Query Q2  Time (ms) | Query Q3  Time (ms) |
| 12,500 | 764.888 // 905.955 | 754.118 // 981.390 | 1465.306 // 2150.337 |
| 25,000 | 854.281 // 1409.285 | 853.038 // 9453.075 | 925.589 // 12615.618 |
| 37,500 | 895.688 // 16687.759 | 916.284 // 12716.308 | 934.355 // 16006.798 |
| 50,000 | 961.488 // 24232.118 | 1019.868 // 14911.615 | 1214.198 // 210469.542 |
| 75,000 | 1063.018 // 17006.174 | 1080.908 // 26475.656 | 1229.531 // 9664.336 |

b)

|  |  |  |  |
| --- | --- | --- | --- |
| work mem (kB) | Query Q1  Time (ms) | Query Q2  Time (ms) | Query Q3  Time (ms) |
| 192 | 1017.387 // 3500.923 | 937.754 // 3695.278 | 968.451 // 4998.872 |
| 320 | 987.498 // 16671.566 | 989.749 // 17067.364 | 1017.355 // 15679.340 |
| 576 | 1007.380 // 17264.960 | 985.381 // 15359.252 | 988.924 // 17135.298 |
| 1088 | 864.386 // 27669.495 | 873.265 // 22462.993 | 909.227 // 20188.133 |
| 2112 | 909.414 // 8978.823 | 791.284 // 8687.315 | 696.529 // 9101.874 |
| 4160 | 902.190 // 6340.033 | 603.568 // 6589.014 | 691.166 // 4729.778 |