

Windowing Query

Stabbing Query

- 1D Windowing Query

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Reduction

👁 Each type-B query can be answered by

two **1D windowing queries**

❖ Essentially, we need to find:

- all **horizontal** segments

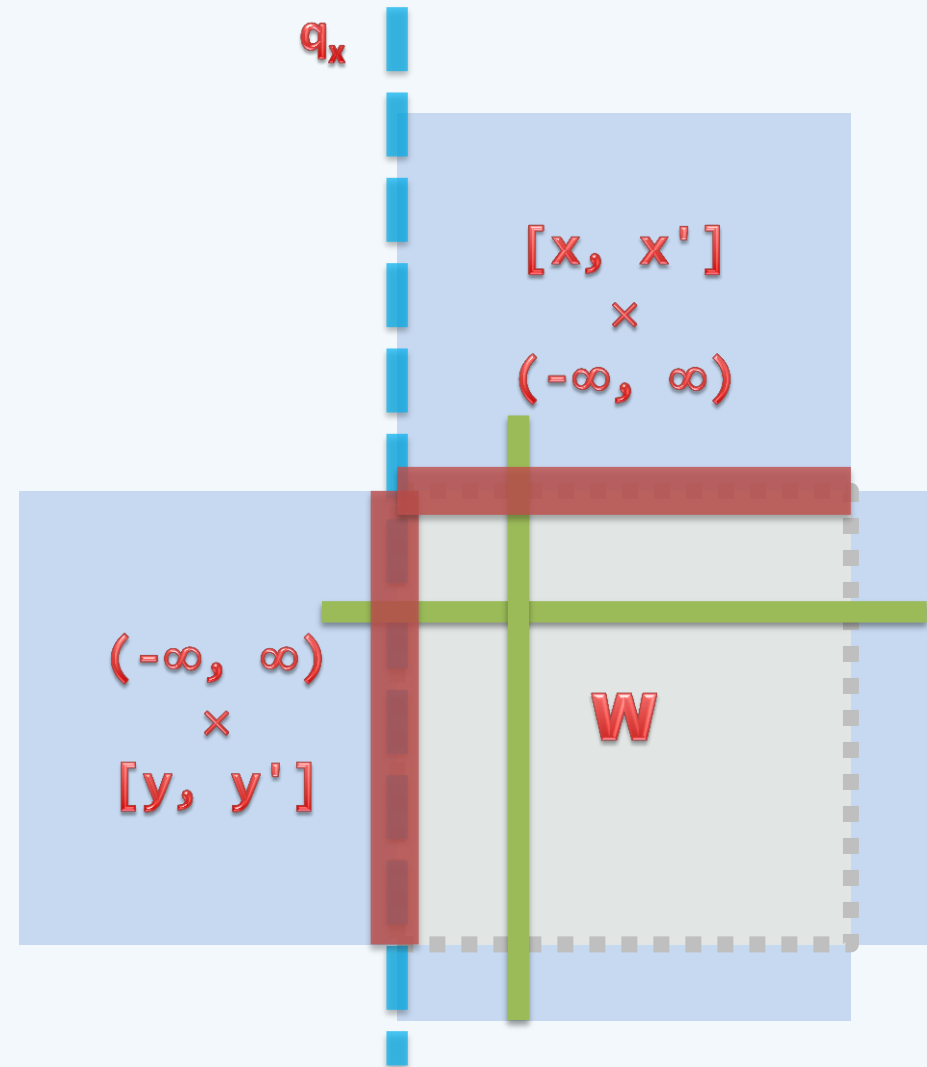
crossing **vertical** slab

$[x, x'] \times (-\infty, \infty)$ and

- all **vertical** segments

crossing **horizontal** slab

$(-\infty, \infty) \times [y, y']$



1D Windowing

👁 When there are no more type-A segments,

a segment intersecting W must **span** W

∴ To report all type-B segments, it suffices

to find all segments that

intersect W in

the **top** or **left** side

❖ Consider the **line** on which

the **left** side lies ...

