

# Point Location

Introduction

- Performance Measurements

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❖ **Preprocessing time**

time needed to preprocess the subdivision  
into a certain **data structure** that  
supports efficient PL queries

❖ **Storage cost**

memory required to  
store and maintain the data structure

❖ **Query time**

time required to respond to an individual query

❖ **[Lower Bound]**

$\Omega(\log n)$  is required to answer each **on-line** query

❖ **Update time**

Time needed to maintain the structure, in case  
the input subdivision is dynamic, i.e.,  
insertions and deletions are allowed