

## BI / read / 1

BI 1	query	BI / read / 1			
BI 2	title	Posting summary			
BI 3	pattern				
BI 4		<div>message: Message</div>			
BI 5		<div>creationDate &lt; \$date</div>			
BI 6	desc.				
BI 7		<div>length</div>			
BI 8		<div>year(creationDate)</div>			
BI 9	desc.	<p>Given a date, find all Messages created before that date. Group them by a 3-level grouping:</p> <ol style="list-style-type: none"> <li>by year of creation</li> <li>for each year, group into Message types: is Comment or not</li> <li>for each year-type group, split into four groups based on length of their content <ul style="list-style-type: none"> <li>0: 0 &lt;= length &lt; 40 (short)</li> <li>1: 40 &lt;= length &lt; 80 (one liner)</li> <li>2: 80 &lt;= length &lt; 160 (tweet)</li> <li>3: 160 &lt;= length (long)</li> </ul> </li> </ol>			
BI 10					
BI 11					
BI 12					
BI 13					
BI 14					
BI 15					
BI 16	params				
BI 17		1	date	Date	
BI 18	result	1	year	32-bit Integer	R
BI 19		2	isComment	Boolean	M
BI 20		3	lengthCategory	String	C
BI 21		4	messageCount	32-bit Integer	A
BI 22		5	averageMessageLength	32-bit Integer	A
BI 23		6	sumMessageLength	32-bit Integer	A
BI 24		7	percentageOfMessages	32-bit Float	A
BI 25	sort	1	year	↓	
		2	isComment	↑	false < true, i.e. the ordering puts Posts first, and Comments second
		3	lengthCategory	↑	order based on the length of the category, 0 (short), 1 (one liner), etc.
	CPs	1.2, 3.2, 4.1, 8.5			