

Name _____

No aids allowed. Answer all questions on test paper. Use backs of sheets if necessary.

The question below is Problem 1.3 in the textbook.

Estimate the complexity of the running time of the Division algorithm in terms of the ‘Big O’ notation.

```
1:  $q \leftarrow 0$ 
2:  $r \leftarrow x$ 
3: while  $y \leq r$  do
4:    $r \leftarrow r - y$ 
5:    $q \leftarrow q + 1$ 
6: end while
7: return  $q, r$ 
```