1. If , prove that for .

B/C: When ,

, for and , for

If .

Suppose there is some and such that and .

Then, the above is equivalent to:

, for and .

I/S: Suppose that , for some .

, for all

, for all

Suppose there is some such that ).

Then , which is equivalent to

, for all

1. Suppose , , and We may assume that and

By the anti-symmetry property, and

Since , then which, by the transitivity property, is equal to . Finally, by the envelopment property of multiplication, .