

# Book 10

## Proposition 7

Incommensurable magnitudes do not have to one another the ratio which (some) number (has) to (some) number.

Let  $A$  and  $B$  be incommensurable magnitudes. I say that  $A$  does not have to  $B$  the ratio which (some) number (has) to (some) number.

$A$   $\longleftarrow$   $\longrightarrow$

$B$   $\longleftarrow$   $\longrightarrow$

For if  $A$  has to  $B$  the ratio which (some) number (has) to (some) number then  $A$  will be commensurable with  $B$  [Prop. 10.6]. But it is not. Thus,  $A$  does not have to  $B$  the ratio which (some) number (has) to (some) number.

Thus, incommensurable numbers do not have to one another, and so on . . . .