This project asks you to prove the associative property of Boolean algebras.

Using only the eight properties in the definition of a Boolean algebra as given in class and the Absorption and Domination properties, give a *formal* proof of the second Associative property: $\forall x \forall y \forall z, (x + y) + z = x + (y + z)$. Recall that a formal proof shows every step (no matter how trivial) and gives a reason for every step, generally shown in a two-column format.

Note that you might find it easier to prove this if you first state and prove a couple of lemmas, as was done in class for the first associative property.