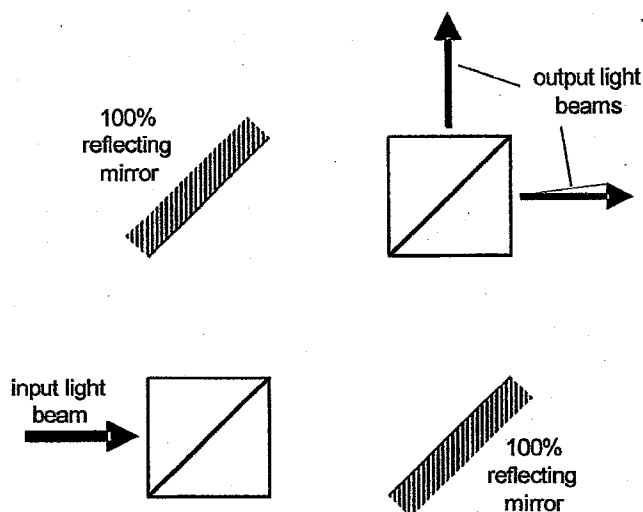


Supplementary questions (all on separate sheets)

Supplementary question 1

In the apparatus below, in which there are two beamsplitters (each 50% reflecting) and two mirrors (each 100% reflecting), what would you do to the apparatus, or what would you add, that would allow you to control how much of the power came out in each of the output beams?



Supplementary question 2

In the apparatus below, what do you think will happen if we turn down the power in the input light beam so much that there is only ever one photon in the apparatus at a time? In that case, will we still be able to control the relative average powers in the two output light beams just as we did before?

