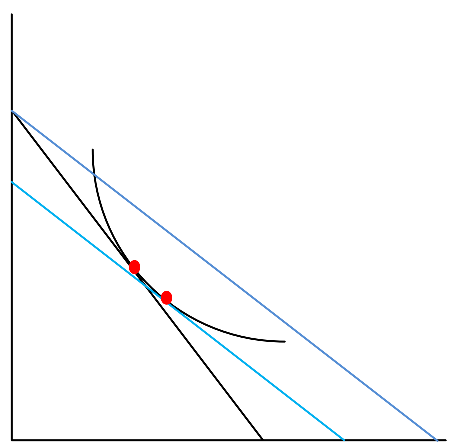
Income and substitution effects: Clarification

We know that when the price of a good decreases there are two effects: the income effect and the substitution effect. The income effect arises because as the price of good 1 falls the consumer becomes richer in real terms in the sense that he can afford more now than before. To isolate the substitution effect of the price decrease, we need take some income away from the person to put him back to his original state.

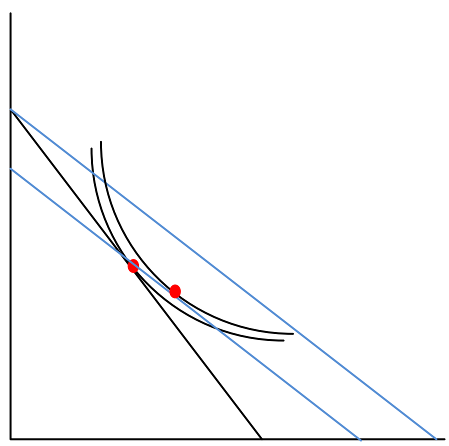
This is where different people make different definitions of what the original state is. Some authors (like the one who has written the textbook for EC3101) take the approach that the consumer is in the original state if he can just about afford the bundle that he was choosing before the price change. Therefore, to find the substitution effect we look at how the consumer changes his consumption on the *budget line* that passes through the old consumption bundle with slope determined by the new price ratio.

Some authors like possibly what you may have studied in EC2101 take the approach that the consumer is in the original state if he attains the exact same utility that he attained before the change. In that case to figure the substitution effect we need to move along the *indifference curve* that passes through the old consumption bundle and figure out the point where the MRS is the same as the current market rate of substitution given by the slope of the new budget line.

This can be confusing in the beginning. However, once you realize that it is a matter of how you define the original state of the consumer then it becomes clear why the analyses are different. As such, there is no right or wrong approach; it is just a difference in the interpretation of the economic idea conveyed by the phrase “original state.”



Substitution effect under the second approach



Substitution effect under the first approach