FIT3158 Note - W4 ILP - Binary Problem

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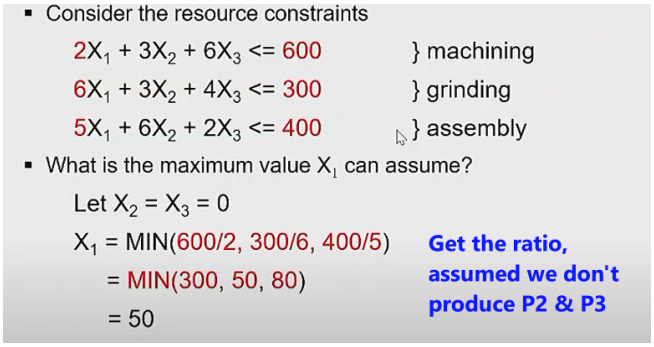
Big M - Fix cost problem

We use big m when there is a need to consider a fixed cost. Let's say product A needs a production set-up cost. So, when we produce A, we not only need the unit cost, but also the set-up cost. In another word, the total cost of product A = unit cost + set-up cost.

The Big M is a constraint where .Y_1 =1 , when we produce A; it is like a trigger.



To determine the value of M — an upper bound on x — we can make use of our constraints from the constraints by getting potential upper bounds on our x value, then we select the one that we can use.