

1. Consider 4 companies, each can produce cars (C) and trucks (T). The following table shows maximum possible amounts of cars and trucks for each company.

Company	Cars	Trucks
Toyota	60	20
Dodge	10	50
Ford	60	60
Chevrolet	40	40

Table 1: Maximum Car and Truck Production by Company

- (a) Draw the production possibility line for each producer.
 - (b) Suppose the 4 companies merge into a firm called TDFC. Draw TDFC's production possibilities curve in a new picture.
 - (c) Suppose the price of trucks is \$1000 and the price of cars is \$2000. Write an equation for the equal revenue line and draw some of the equal revenue lines in the previous picture. How many cars and trucks exactly will TDFC produce?
 - (d) Suppose cars become cheaper, their price drops to \$1000. How will your answer to part (c) change?
2. James Bond likes his favorite martini mixed precisely with equal parts of vodka and dry vermouth. Vodka costs \$3 a shot ($p_v = 3$) while dry vermouth costs \$2 a shot ($p_d = 2$). His drinking budget Y is \$500.
 - (a) Draw James's budget constraint.
 - (b) Draw James's indifference curves and show the combination of vodka and dry vermouth that makes James happiest given Y , p_v and p_d .
 - (c) Derive James's demand curve for vodka.
 - (d) After 40 years of hard service, James loses his sense of taste. He no longer distinguishes between vodka and dry vermouth; he is only interested in the alcohol content of the beverage. Vodka is 40% alcohol while vermouth is 20% alcohol. Draw James's new indifference curves.
 - (e) How many shots of vodka and/or vermouth will James consume given that his tastes have changed?