Unit 3

Ch 3 Homework Key

#5 Solution in text

#10 The budget constraint does NOT change if prices and income double. If original budget line equation is $I = P_x X + P_y Y$ ⇒ new budget line equation is $2I = 2P_x X + 2P_y Y$. Dividing both sides by 2 yields original budget line equation.

#18 Solution in text

#21 Solution in text

Ch 4 Homework Key

#1 Solution in text

7. He will not be worse off. If he were to continue to buy all new books, the increase in income would just cover the price increase, leaving him at the corner solution in the diagram below. However, if he buys one used book and 7 new ones, he will have $27 left over to buy pizza and beer. Thus any combination of books that includes one or more used books leaves him with leftover income and therefore better off. Figure 4.9 shows a case where Ximing is better off. It is possible that the change in relative price is not sufficient to move him off the corner solution.

Figure 4.9

Unit 3

Ch 4 Homework Key Continued

9. See Figure 4.11. Ann will buy more books and less ice cream this year and her utility will be better off this year on I^2 than on I^1. This is because the price of book rose by less than the price of ice cream. So Ann can gain higher utility by consuming more books and less ice cream.

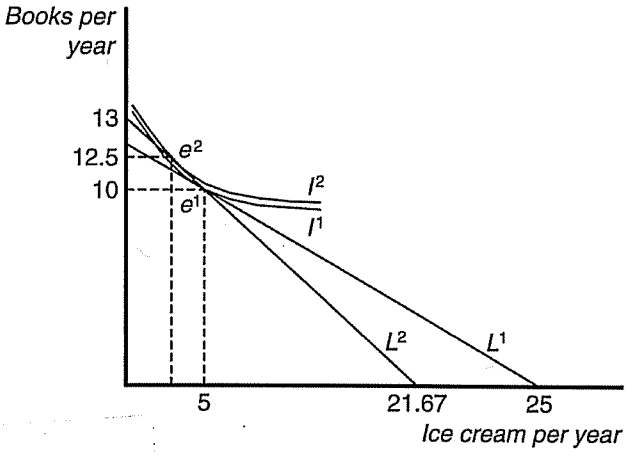

Figure 4.11

14. The original budget constraint is $Y = p_z Q_z + p_c Q_c$; normally Ralph buys 1 pizza and 2 colas, which means $Q_z = 1$ and $Q_c = 2$. Therefore $Y = p_z + 2p_c$. New budget constraint: $Y = p_z + 0.5\,p_z(Q_z - 1) + p_c Q_c = 0.5p_z + 0.5\,p_z Q_z + p_c Q_c$. What Ralph will choose when faced with the new constraint depends on his indifference curve. The relative price change will induce him to consume more pizza. See Figure 4.15.

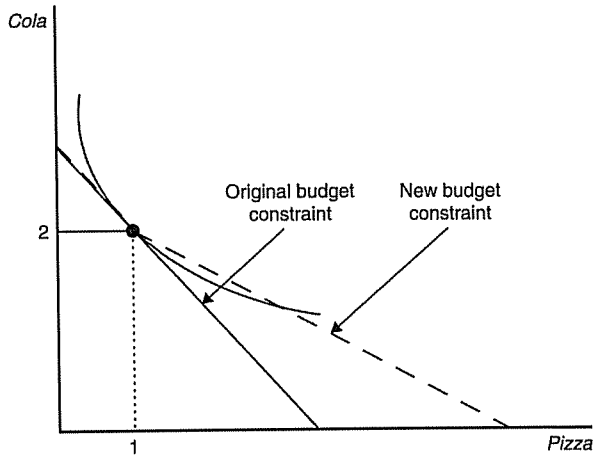

Figure 4.15

#24 Solution in text

Unit 3

Ch 5 Homework Key

3. If the government taxes gasoline at $1 per gallon, the budget line rotates in, with the intercept on the "all other goods" axis remaining unchanged. If the tax only applies to purchases over 10 gallons per week, then the budget line is nonlinear, increasing in slope beyond the 10 gallons per week level, as shown in Figure 5.5.

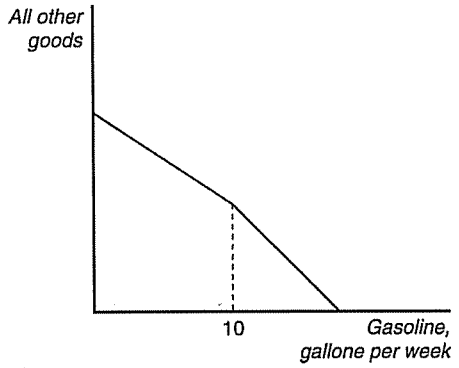

Figure 5.5

#28 Solution in text