

Chapter 11 Selected Answers

Problem 11.2: The product-real wage = 3.29 cars per year; consumption-real wage = $\$_{1982-84}19,585$ based on CPI (1982-84 = 100). (In effect, the underlying units are the number of consumption bundles (the basket of goods) on which the CPI is based that the nominal wage will buy.) The product-real wage is relevant to the profit-maximizing choices of firms; whereas the consumption-real wage is relevant to the consumption and labor-supply decisions of individuals.

Problem 11.3: Raising the standard deduction by \$1,000 implies that disposable income increases for every taxpayer. Recall that leisure is usually analyzed as a normal good, which means that more leisure is consumed (i.e., people work less) when income increases. Also, income effects are likely to be small for poor people and, possibly, greater for richer people. As a result, the tendency would be for an increase in the standard deduction to reduce the supply of labor, but probably by very little for the poorer workers and perhaps noticeably for richer workers.

Problem 11.6: State lotteries typically pay large wins as annuity (i.e., a steady stream of payments) over a number of years, say, twenty, adding up to the value of the prize or as a lump sum equivalent to the present value of the annuity (substantially smaller than the published value of the prize – see Chapter 6 on present value). Thus, we can think of the lottery as providing an increased annual income for its recipient – either the annuity payments or the interest on the lump sum. As these do not effect the real wage rate (the opportunity cost for the winner), the result is a pure income effect. The analysis is exactly the same as that for Problem 11.3, except that the annual income is greater, so that the income effect is likely be larger for a poorer person than in that problem.

Problem 11.12:

[Earlier versions of the answer key used incorrect data. This answer was revised on 10/31/12 to reflect the correct data. Also note that an error has been noted on p. 331 of the text which is relevant to this problem: The label on the second equation (9.17) should read "(9.17)". This correction is noted on the Errata page of the textbook website.]

(b) decrease by \$0.11 per hour \approx 1/3 percent

(d) increase by \$0.34 per hour = 1 percent.

Problem 11.16: Assuming that the fall in population also translates into a fall in the labor force, then the upward-sloping supply curve is shifted leftward. Since capital is unaffected by the Black Death, the downward-sloping demand curve for labor remains constant. Hence, the equilibrium (supply curve crosses demand curve) moves up and to the left: real wages rise and employment falls. In terms of the production function,

the fully employed, but now smaller, labor force is operating on a steeper part of the labor production function, equivalent to a higher marginal product of labor and, in equilibrium, a higher real wage.