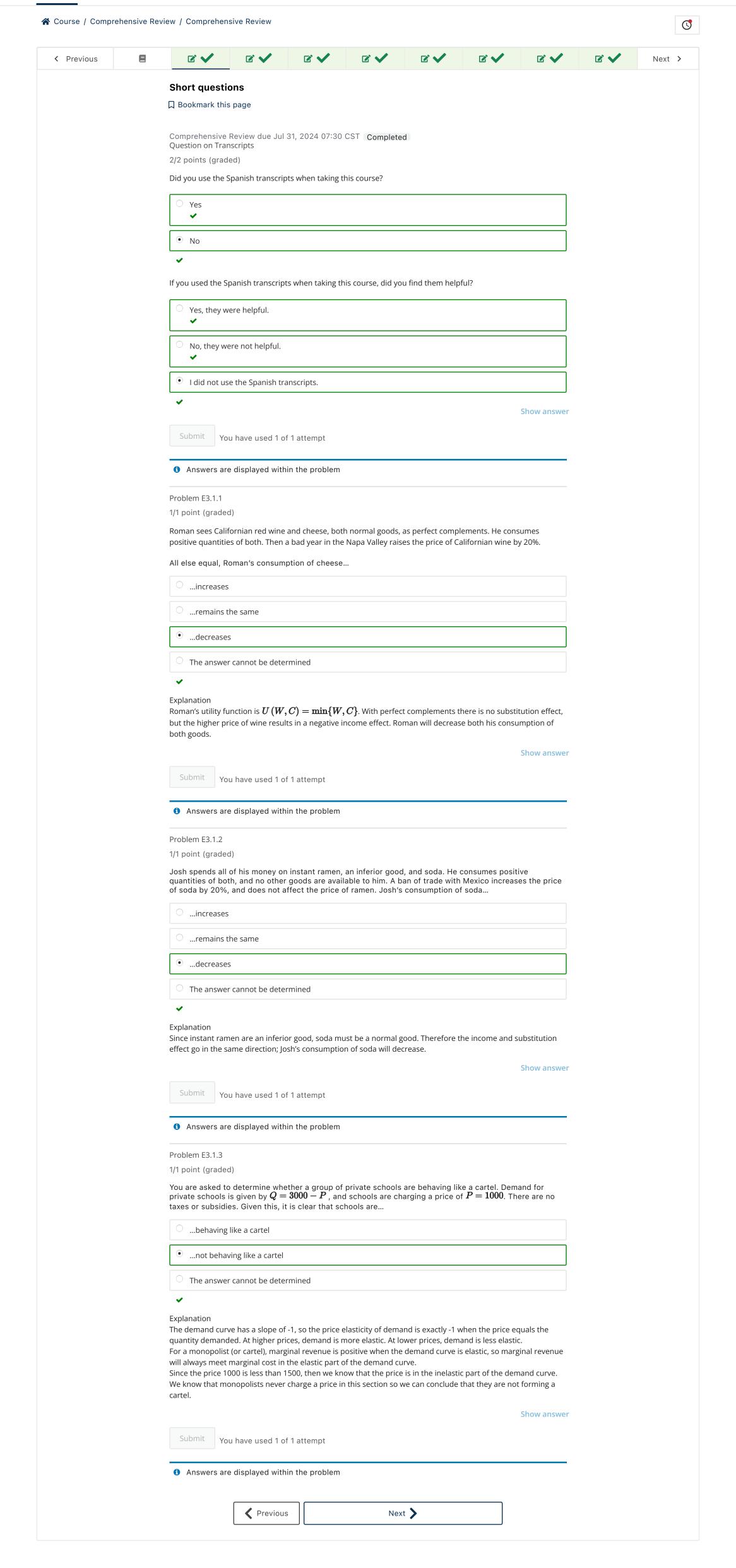
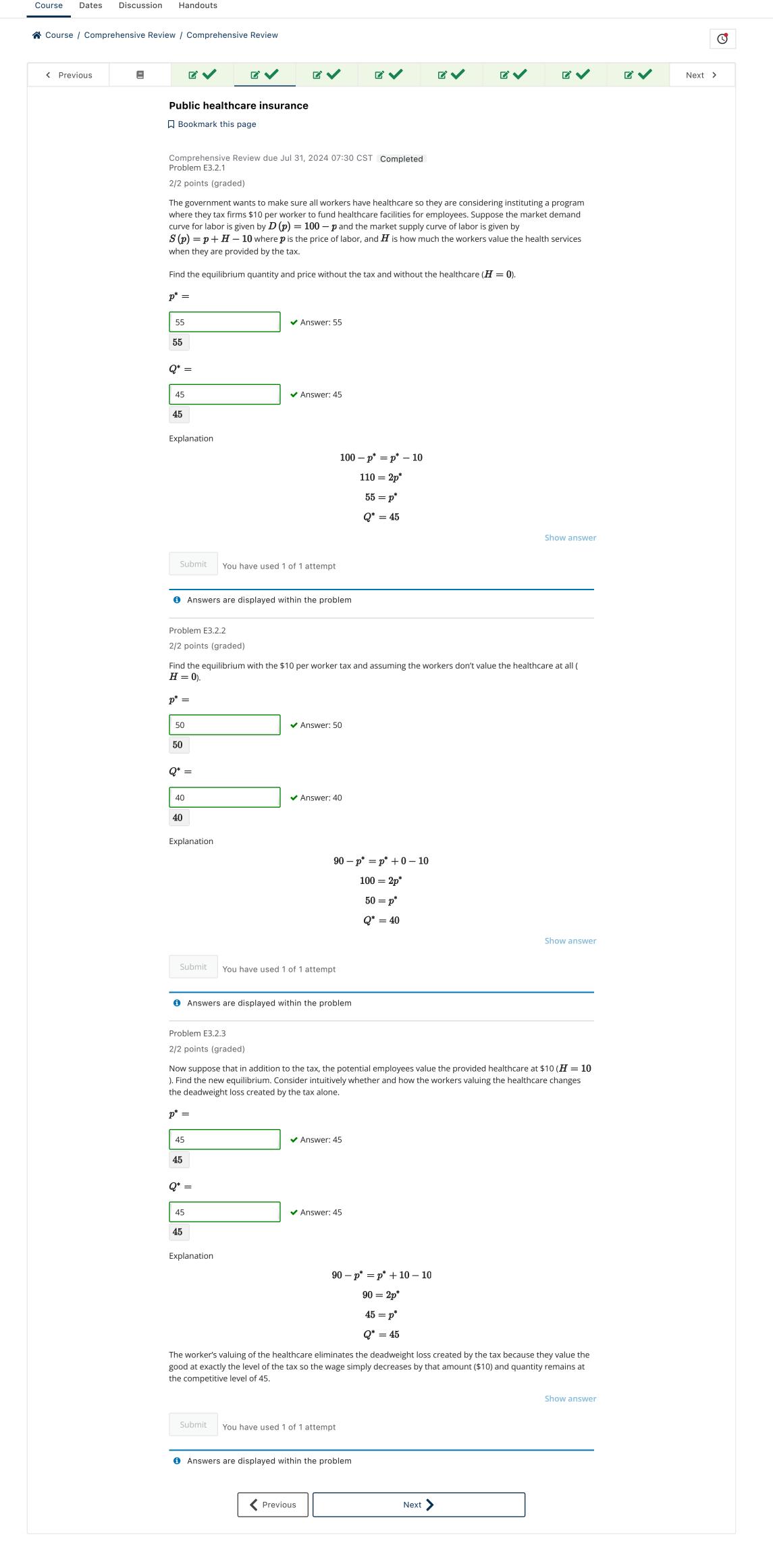
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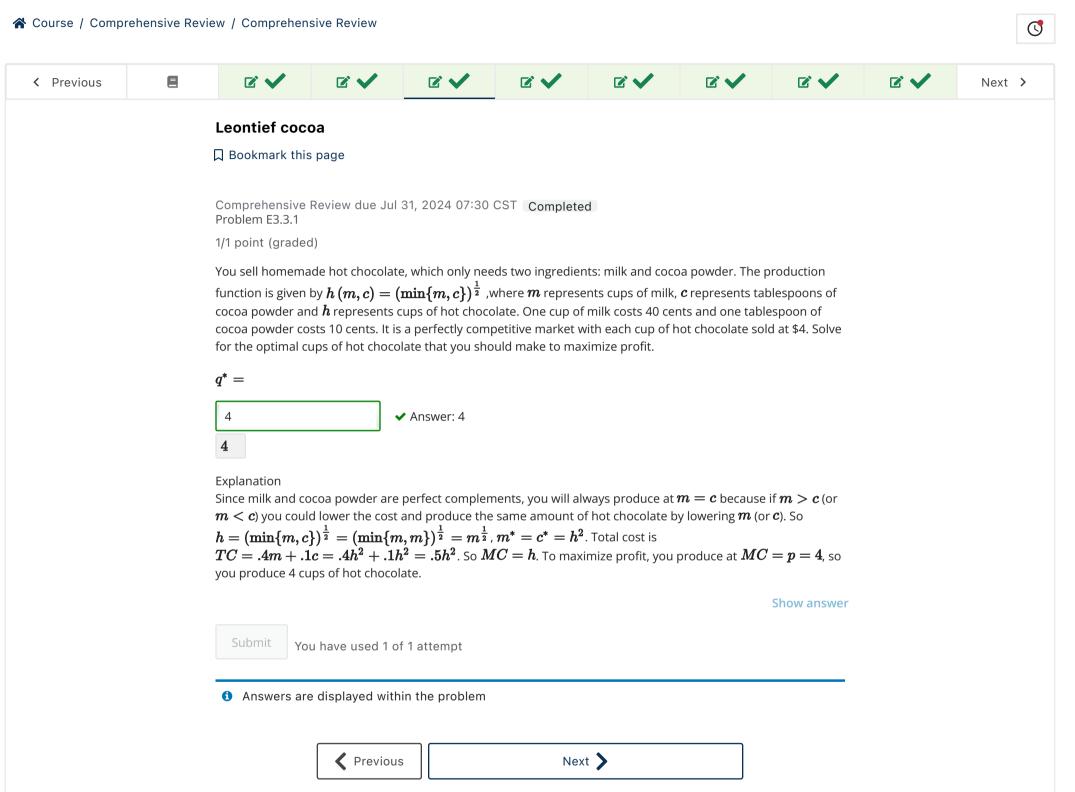




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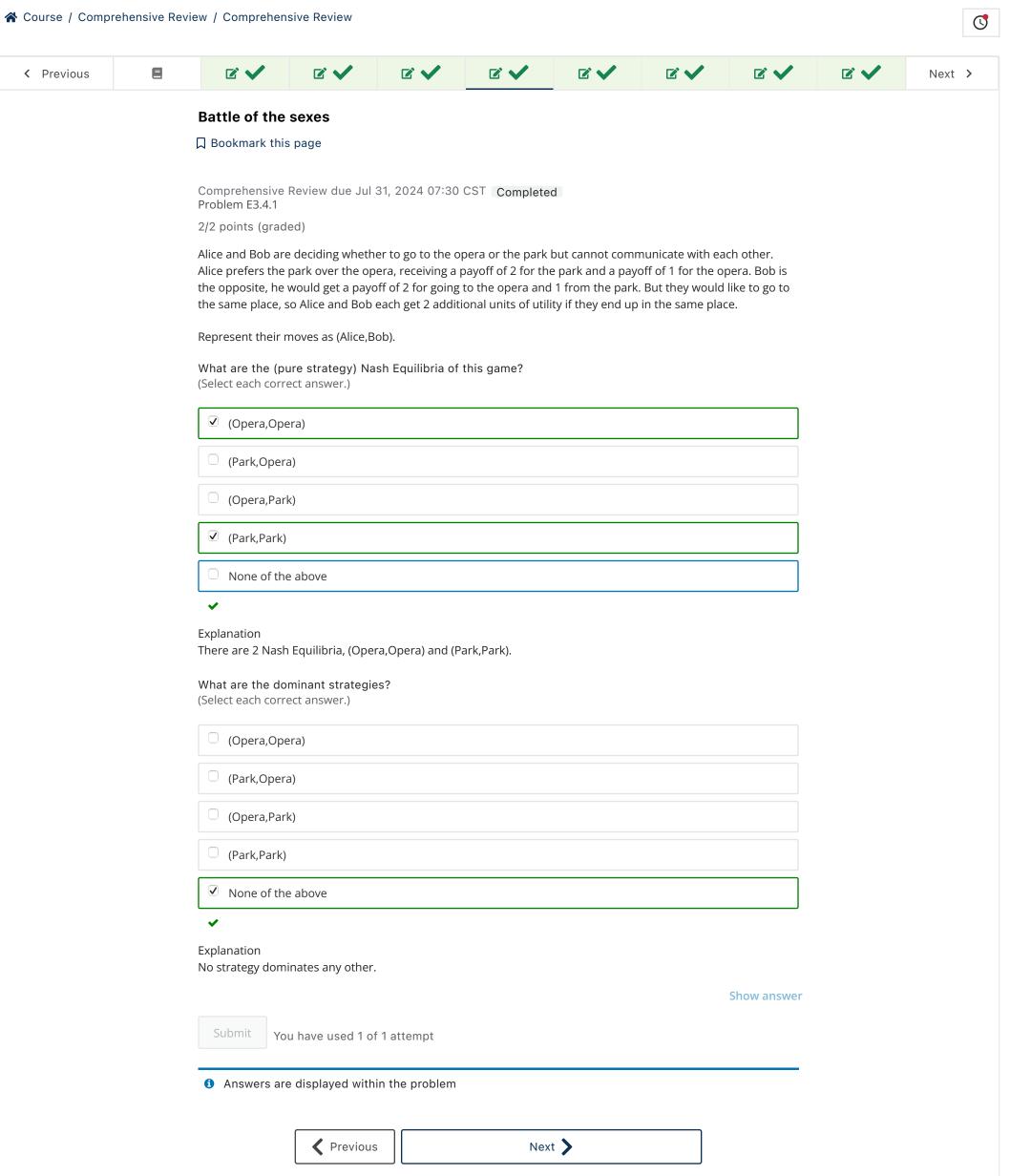
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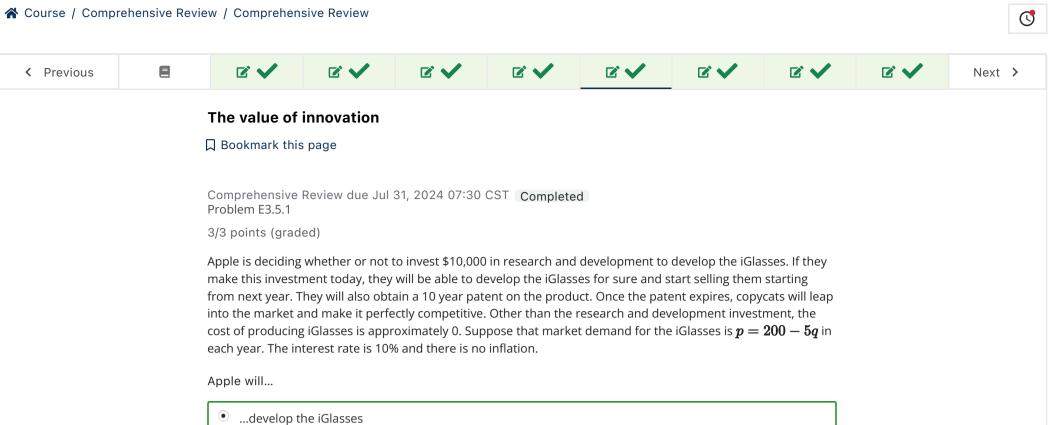
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...not develop the iGlasses

The answer is ambiguous.

If Apple develops the iGlasses they will make monopoly profits every year in which they are protected by the patent and 0 once the patent expires. The monopoly price is $p^M=100$, the monopoly quantity is $q^M=20$ and monopoly profits are $\pi^M=2000$ per year. The NPV of this investment is:

$$NPV = -10000 + \sum_{t=1}^{10} rac{2000}{\left(1.1
ight)^t} pprox 2289$$

Since the NPV is positive, Apple would invent the iGlasses.

Suppose that the U.S. government decreases the number of years for which a patent is valid to 5.

Apple will...



Explanation

If the patent only lasts 5 years, the NPV of this investment is:

$$NPV = -10000 + \sum_{t=1}^{5} rac{2000}{\left(1.1
ight)^t} pprox -2418$$

Since the NPV is negative, Apple would not invent the iGlasses.

Following this example, how we can expect the length of patents to affect innovation?



Explanation

If patents are not valid for a long enough time, incentives to innovate may be reduced.

Show answer

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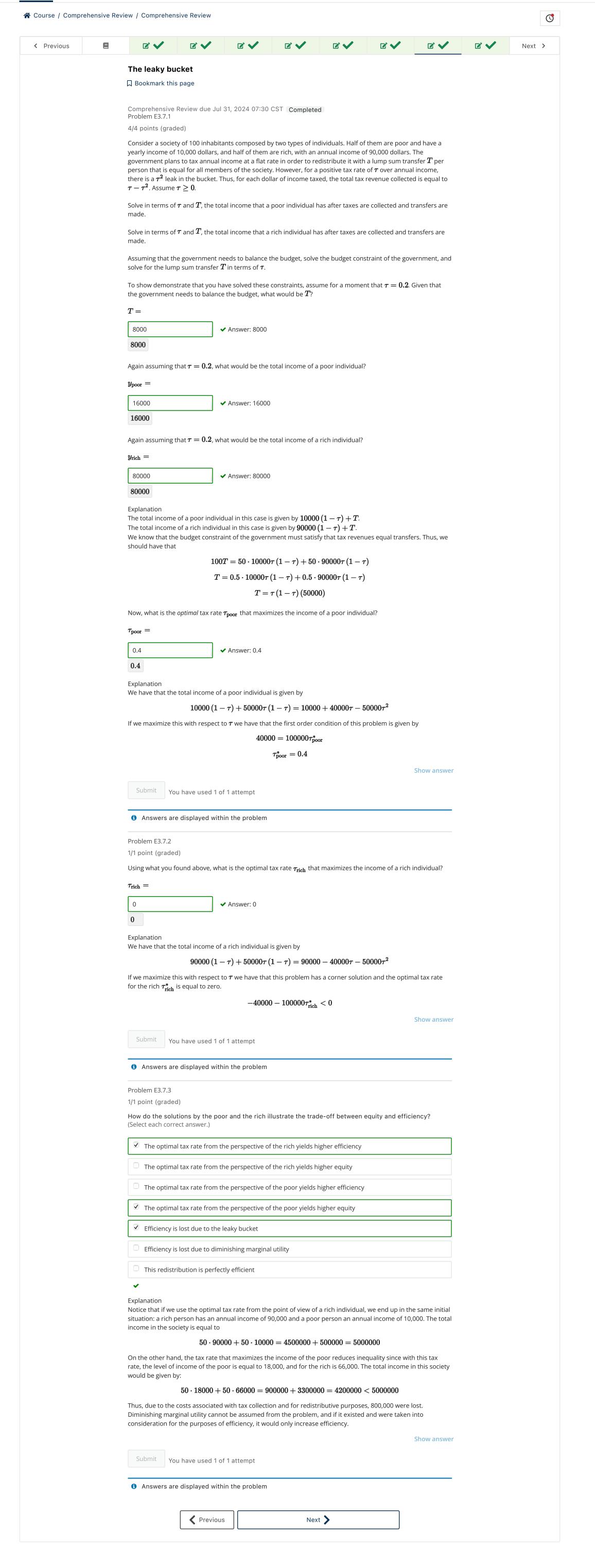
4 Answers are displayed within the problem



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Next > Comprehensive Review due Jul 31, 2024 07:30 CST Completed In the US, beer and meat are the only two commodities produced and consumed. A gallon of beer requires 5 minutes of labor to produce, and a pound of meat requires 8 minutes of labor to produce. Assume that labor is the only input needed to produce beer and meat. There is a total of 123 billion hours of labor per year, and a total of 6.3 billion gallons of beer and 48 billion pounds of meat are produced each year in the US. Assume that wage is the same in the production of both goods, and the markets for the goods are both perfectly competitive. Within the US under autarky, what is the ratio of the price of meat to the price of beer? The marginal cost of beer is 5 minutes of labor, and the marginal cost of meat is 8 minutes of labor, so the Let the ratio above be $ar{m{k}}$. Suppose that on the international market, we can trade any amount of beer for meat or meat for beer, at a ratio of k gallons of beer to 1 pound of meat. For what values of $m{k}$ will international trade increase the welfare in the US relative to autarky? (Select each correct answer.) $\checkmark k < \overline{k}$ $k=ar{k}$ $\overline{\checkmark} \quad k > \overline{k}$ None of the above Explanation At any ${\pmb k}$ except 1.6, the welfare in the US will be higher, as it can specialize in one good and beneficially trade for At ${\it k}=1.6$, welfare in the US will be unchanged whether it specializes in beer, or specializes in meat, or diversifies. Show answer Submit You have used 1 of 1 attempt Answers are displayed within the problem Previous Next >

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Online Microeconomics rdgunawan 🗸 Course Dates Discussion Handouts ☆ Course / Comprehensive Review / Comprehensive Review **U** Previous Next > Waiting at the benefits office □ Bookmark this page Comprehensive Review due Jul 31, 2024 07:30 CST Completed Problem E3.8.1 3/3 points (graded) Suppose poor households have preferences over consumption ($m{C}$) and leisure ($m{T}$) given by $u(C,T) = \ln(C) + \ln(T)$, and they can work at hourly wage $w_p = 5$. Assume consumption costs one dollar, and they have 24 hours in a day to allocate to either leisure or working. Solve for the household's optimal bundle of consumption and leisure. C =60 ✓ Answer: 60 60 T =12 ✓ Answer: 12 12 How much utility do they get? u =6.5793 ✓ Answer: 1*In(720) 6.5793 Explanation From MRS=MRT, From the (time) budget constraint, $T+rac{C}{w_p}=24.$ Combining, $C=12w_p$ T=12Thus they consume C=60 and get utility $u=\ln{(60)}+\ln{(12)}pprox{6.5793}$. Show answer Submit You have used 1 of 1 attempt Answers are displayed within the problem Problem E3.8.2 3/3 points (graded) To help the poor, the government offers an income transfer of \$20, but because picking up the check takes time, participants can only work up to 5 hours per day if they sign up for the program. (Continue to assume any time not spent working is leisure.) Find their optimal bundle when the program is in effect. C =45 ✓ Answer: 45 45 T =19 ✓ Answer: 19 19 How much utility do they get? u =6.7511 ✓ Answer: 1*In(855) 6.7511Explanation With no restrictions on time the poor would choose $C = rac{24w_p + 20}{2} = 70.$ $T = rac{24w_p + 20}{2w_p} = 14.$ But that violates the terms of the program, so instead they get as close to this allocation as they can and choose $C+19w_p=24w_p+20$ $C=5w_p+20=45$ T=19.Thus they get utility $u=\ln{(45)}+\ln{(19)}pprox 6.75110$. Show answer Submit You have used 1 of 1 attempt Answers are displayed within the problem Problem E3.8.3 3/3 points (graded) If the poor have a choice to sign up for the program, will they? • The poor will choose to enroll The poor will not choose to enroll The poor are indifferent about enrolling What if the program didn't limit their labor supply, and was a pure income transfer of \$20? • The poor would choose to enroll The poor would not choose to enroll The poor would be indifferent about enrolling It's possible that the answers above depended on the functional form of the utility function. Suppose that the utility function of the poor was $u\left(C,T\right) =C$, and that the program limits labor supply. In this case, if the poor had a choice to sign up for the program, would they? The poor would choose to enroll • The poor would not choose to enroll The poor would be indifferent about enrolling ~ Explanation Without either program the poor get utility 6.5793. In deciding whether to sign up, they must weigh the tradeoffs between decreased consumption but increased leisure. Enrolling gives them utility 6.7511 so they will choose to enroll in the program. If there were no labor restrictions, the poor would still sign up because they could then implement their optimal bundle of C=70 and T=14 which gives them higher utility.

Explanation Without either program the poor get utility 6.5793. In deciding whether to sign up, they must weigh the tradeoffs between decreased consumption but increased leisure. Enrolling gives them utility 6.7511 so they will choose to enroll in the program. If there were no labor restrictions, the poor would still sign up because they could then implement their optimal bundle of C=70 and T=14 which gives them higher utility. The poor will not always sign up for the program if there are work restrictions. If, for example, the utility function of the poor was u(C,T)=C, the poor would not sign up for the program since the program reduces consumption. If there were no work restrictions, however, the poor will always sign up because the program gives them free money.

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