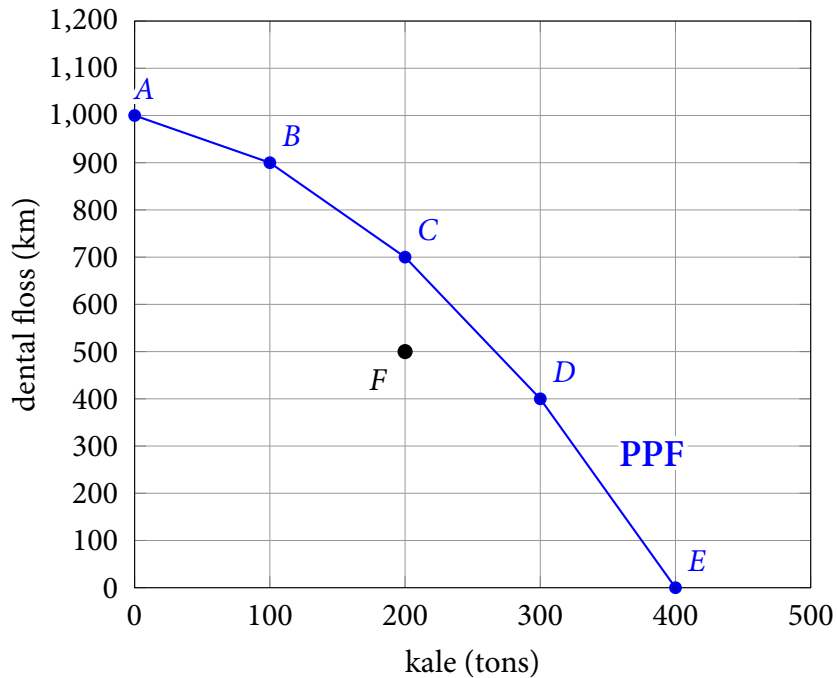# Exam 2

Please label proper units as appropriate.

Show your work to maximize partial credit.

Part A: A two-good economy of kale and dental floss

Consider an economy that produces two goods—kale and dental floss. The production possibility frontier of the economy is shown below.

1. What is the cost of producing C instead of A?

2. What is the benefit of producing C instead of A?

3. What is the cost of producing D instead of C?

4. What is the benefit of producing D instead of C?

5. At *F*, what is the cost of producing an additional 200 km of dental floss?

6. At *F*, what is the cost of producing an additional 400 km of dental floss?

7. At *F*, what is the cost of producing an additional 100 tons of kale?

8. At *F*, what is the cost of producing an additional 200 tons of kale?

9. Is production efficient at *B*?

10. Is production efficient at *F*?

11. Is the cost of kale increasing, decreasing, or constant?

12. Is the cost of dental floss increasing, decreasing, or constant?

Suppose that in 2020, the economy produces B. In 2021, the economy produces D.

Year	Price of kale ($ per ton)	Price of dental floss ($ per km)
2020	2	8
2021	3	10

Please use 2020 as the base year for any real GDP or CPI calculations.

13. What was the nominal GDP of the two-good economy in 2020?

14. What was the nominal GDP of the two-good economy in 2021?

15. What was the percent change in nominal GDP from 2020 to 2021?

16. What was the real GDP of the two-good economy in 2020?

17. What was the real GDP of the two-good economy in 2021?

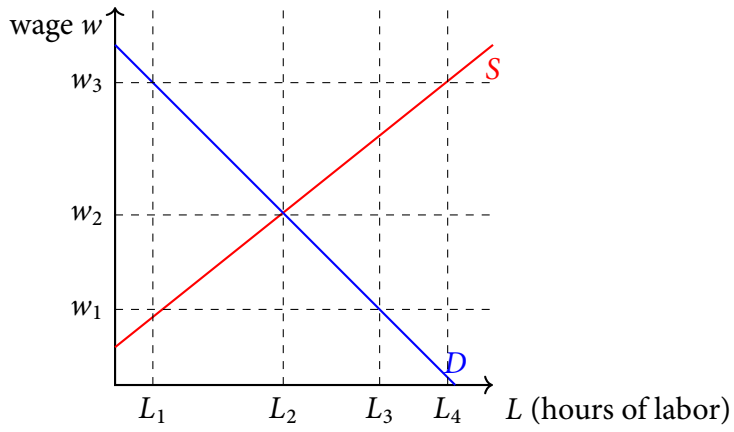**18.** What was the percent change in real GDP from 2020 to 2021?

19. Based on your GDP calculations, what was the inflation rate from 2020 to 2021?

20. What was the rate of inflation in the price of kale from 2020 to 2021?

21. What was the rate of inflation in the price of dental floss from 2020 to 2021?

22. Calculate a consumer price index for 2020.

23. Calculate a consumer price index for 2021.

24. Calculate the percentage change in this CPI from 2020 to 2021.

25. You calculated economy-wide inflation using GDP and again using CPI. How much higher is inflation calculated from CPI than inflation calculated from GDP?

Part B: The La Crosse-Onalaska, WI-MN metropolitan statistical area

Consider these actual labor force data from the Bureau of Labor Statistics:

Labor force data for the La Crosse-Onalaska, WI-MN MSA			
	Number of persons		
	Aug. 2019	Aug. 2020	Aug. 2021	Aug. 2022
Employment	74064	72257	74949	74048
Unemployment	2147	3779	2192	1904

26. What was the unemployment rate in Aug. 2019?

27. What was the unemployment rate in Aug. 2020?

28. What was the unemployment rate in Aug. 2021?

29. By how many percentage points did the unemployment rate change from Aug. 2019 to Aug. 2020?

30. By how many percentage points did the unemployment rate change from Aug. 2020 to Aug. 2021?

31. Do you think more jobs opened in the year prior to Aug. 2020 or the year following Aug. 2020?

Part C: Multiple choice

Please choose the best response.

32. In a two-good economy that produces x and y, production is efficient if and only if some positive amount of good x must be forgone to produce more good y.

    (a) True
    (b) False

33. If the price of an asset is expected to rise in the future:

    (a) asset owners will be more willing to sell it now.
    (b) it will be more in demand today.
    (c) the price of the asset will fall today.
    (d) the market is irrational.

34. A reason that does NOT explain why frictional unemployment exists is:

    (a) that new jobs are continually being created.
    (b) that some old jobs are always being destroyed.
    (c) that new workers are always entering the labor market.
    (d) the minimum wage.

35. When the unemployment rate is very low, most of it tends to be:

    (a) cyclical.
    (b) frictional.
    (c) seasonal.
    (d) structural.

36. When the demand for labor is falling and employers have committed to high wages, _____ unemployment will result.

    (a) frictional
    (b) cyclical
    (c) permanent
    (d) structural

37. Firms pay an efficiency wage because:

    (a) it reduces the risk of losing the best workers.
    (b) it is required by law.
    (c) they don't have to offer health insurance if they pay efficiency wages.
    (d) it reduces the employee's income tax liability.

38. What is the quantity of labor demanded at a binding minimum wage of w_3?

    (a) L_1 (c) L_3

    (b) L_2 (d) L_4

39. What is the quantity of labor supplied at a binding minimum wage of w_3?

    (a) L_1 (c) L_3

    (b) L_2 (d) L_4

40. The binding minimum wage of w_3 leads to surplus of labor of:

    (a) $L_3 - L_1$.   (c) $L_4 - L_1$.

    (b) $L_3 - L_2$.   (d) $L_4 - L_2$.