

Chapter 22 Homework

Name: _____ Date: _____

Show calculations, label units, and explain mechanisms in words. Estimated completion time: 60-75 minutes. Total: 100 points.

Q1 - Transactions and the GDP boundary (20 points)

For each case, identify what was newly produced this period, whether it is final or intermediate, and how it enters GDP. When only a service associated with a transaction counts, state that explicitly.

- a. A household buys a newly produced bicycle from a domestic retailer for \$900.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- b. A steel mill sells \$40,000 of sheet steel to a domestic appliance maker, which uses it this year.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- c. A dealer buys a used car for \$14,000 and resells it for \$15,200 after providing current sales and preparation services.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- d. An investor buys \$5,000 of existing corporate stock and pays a broker a \$30 commission.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- e. A household pays \$600 cash for landscaping performed this year, but the worker does not report the income.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- f. An accounting firm sells \$2,000 of current accounting services to a domestic mining firm.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- g. A U.S. farmer sells wheat produced this year to a Canadian grocery chain.

New production: _____ Final/intermediate: _____

GDP treatment: _____

- h. A farmer buys a newly produced tractor for use in the farm business.

New production: _____ Final/intermediate: _____

GDP treatment: _____

Q2 - Market basket and price index (15 points)

A fixed teaching basket costs the amounts shown below. Use Year 3 as the base year. Calculate the index for every year and interpret Year 6 in one sentence.

Fixed teaching basket

Year	1	2	3	4	5	6
Basket cost	\$48	\$54	\$60	\$66	\$63	\$72
Price index	_____	_____	_____	_____	_____	_____

Q3 - CPI changes (15 points)

Use the BLS CPI-U index levels shown (not seasonally adjusted, 1982-84 = 100): August 2025 = 323.976; July 2026 = 333.918; August 2026 = 334.980. (a) Calculate the percent change from July to August 2026. (b) Calculate the percent change from August 2025 to August 2026. (c) BLS reports 12-month inflation of 3.4 percent in both July and August 2026. By how many percentage points did the reported 12-month rate change? (d) Identify whether the price-level movement from July to August is inflation, disinflation, or deflation.

Q4 - Expenditure GDP (15 points)

An economy records household consumption of \$800 billion, business fixed investment and inventory investment of \$180 billion, government purchases of \$240 billion, exports of \$90 billion, and imports of \$130 billion. Label C, I, G, X, and M; compute NX and GDP; then explain in one sentence why imports are subtracted.

Q5 - Value added (10 points)

A farmer sells wheat to a mill for \$45. The mill sells flour to a bakery for \$110. The bakery sells bread to households for \$200. Calculate value added at each stage and verify that the sum equals the final value.

Q6 - Nominal to real GDP (15 points)

Nominal GDP is \$30.40 trillion and a simple GDP price index is 125.0 (reference year = 100). Calculate real GDP in reference-year dollars. Then state why published chained-dollar components generally do not add exactly to published real GDP.

Q7 - Real GDP per capita and limits (10 points)

Using real GDP of \$24.32 trillion and a population of 342 million, calculate real GDP per capita. Then name one mechanism-based reason the average is not a complete measure of living standards.