Academic Program Assessment Report

Academic Year(s) Assessed: 2025-2026
College: College of Agriculture and College of Letters and Science
Department: Agricultural Economics & Economics
Department Head: Eric Belasco
Submitted by: Wendy Stock, Certifying Officer for DAEE AGBE programs

Program(s) Assessed
List all majors (including each option), minors, and certificates that are included in this assessment – add or subtract rows as needed – please use official titles:

Majors	Minors, Options, etc.
Economics	Economics

Section 1. Past Assessment Summary.
Response:

The AY 2024 2025 ECNS program assessment focused on program learning outcome 5: Assess the impacts of macroeconomic fiscal and monetary policies on economy-wide outcomes such as national income, unemployment, and income distribution

Reviewer feedback on that assessment was very positive but asked for some clarity regarding the format of homework assignments used for the assessment. Reviewers also asked for indirect evidence from alumni or students as part of the assessment. We are incorporating that feedback into this year's assessment.

Section 2. Institutional Assessment Data Request.

Based on the rationale on the Instructions page, please review your program learning outcomes (PLOs) and identify whether you have PLOs that address the Core Qualities. **There are no right or wrong answers.**

Identify 1-2 major-required courses that might have student assignments designed to meet these objectives at least at a surface level. If you cannot identify a course in your program that aligns with this request, please check the appropriate box. At this juncture, this is for information gathering as we plan future institutional assessment endeavors.

Core Quality LOs are Institutional Learning Outcome (ILO)	**PLO overlaps with MSU Core Quality** Mark X if program has at least one PLO that	**Beginning Level** e.g. CORE Courses (US, W, Q, IN, CS, IA, IH, IS, D)	**Developing Level** e.g. list one 200- or 300-level course	**Proficient Level** e.g. list one 300- or 400-level courses, Capstone, Research (R) Core courses	**Not Applicable (N/A)** No course exists in our program that addresses this Core

	overlaps with an ILO				Quality / ILO
Thinkers & Problem Solvers	X	Core classes are designed to address an introductory, foundational level of Core Qualities. Some may overlap into the developing level, but most intermediate-to-developing or proficient/mastery level courses will exist within the majors.	ECNS 101 ECNS 202 ECNS 204	Any ECNS 300- or 400 level course	
Effective Communicators	X		ECNS 251	ECNS 403 ECNS 432	
Local & Global Citizen	X		ECNS 251 ECNS 202	ECNS 314 ECNS 317 ECNS 303 ECNS 320 ECNS 372	

Section 3. Actionable Research Question for Your Assessment.

Response: How well can ECNS students demonstrate an understanding of the comparative advantage motivations for trade at the individual, business, and international levels?

Section 4. Assessment Plan, Schedule, and Data Sources.

a) Did you change the previously established Assessment Plan Schedule. If yes, how was it changed?

N/A

b) Please provide a multi-year assessment schedule that will show when all program learning outcomes will be assessed, and by what criteria (data). List your PLOs in full for reference. Add rows as necessary.

PLO#	PROGRAM LEARNING OUTCOME	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	Data Source*
1	Apply & Analyze: Apply the concepts of economics to current social issues and/or public policies	X					Any ECNS course
2	Apply & Evaluate & Analyze: Apply skills in mathematics, graphs, and written communications to analyze economic relationships and test the predictions of economic models using real-world data					X	ECNS 403 ECNS 432 ECNS 451
3	Analyze, & Apply & Evaluate: Apply knowledge and skills in welfare analysis to evaluate the costs, benefits, and distributional impacts of public policies	X					ECNS 101 ECNS 251 ECNS 204 ECNS 301
4	Apply & Analyze & Evaluate: Use calculus-based methods to predict and compare output, price, quantity, efficiency, and social welfare outcomes in different types of markets (e.g., competitive, monopoly)		X				ECNS 301

5	Analyze & Evaluate: Assess the impacts of macroeconomic fiscal and monetary policies on economy-wide outcomes such as national income, unemployment, and the income distribution			X			ECNS 202 ECNS 251 ECNS 303
6	Understand & Apply: Demonstrate an understanding of the comparative advantage motivations for trade at the individual, business, and international levels.				X		ECNS 101 ECNS 204 ECNS 251 ECNS 314

*Assignments or exams from the listed courses can be used as student artifacts for the program assessment, students in lower-level courses are expected to demonstrate beginning and developing skills, while students in upper-level courses are expected to demonstrate competency and accomplishment. Feedback on the PLOs can also include indirect evidence (i.e. surveys of students, alumni, or advisory councils) to assess the programs.

c) What are the threshold values for which your program demonstrates student achievement? Provide a rationale for your threshold values.

The threshold values in the table below distinguish between beginning/developing learners and competent/accomplished learners.

Threshold Values		
PROGRAM LEARNING OUTCOME	Threshold Value	Data Source
1. Apply & Analyze: Apply the concepts of economics to current social issues and/or public policies	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of assessed students to score above 3 on a 1-4 scoring rubric.	Randomly selected student assignments or exams
2. Apply & Evaluate & Analyze: Apply skills in mathematics, graphs, and written communications to analyze economic relationships and test the predictions of economic models using real-world data	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of assessed students to score above 3 on a 1-4 scoring rubric.	Randomly selected student assignments or exams
3. Analyze, & Apply & Evaluate: Apply knowledge and skills in welfare analysis to evaluate the costs, benefits, and distributional impacts of public policies	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of assessed students to score above 3 on a 1-4 scoring rubric.	Randomly selected student assignments or exams
4. Apply & Analyze & Evaluate: Use calculus-based methods to predict and compare output, price, quantity, efficiency, and social welfare outcomes in different types of markets (e.g., competitive, monopoly)	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of	Randomly selected student assignments or exams

	assessed students to score above 3 on a 1-4 scoring rubric.	
5. Analyze & Evaluate: Assess the impacts of macroeconomic fiscal and monetary policies on economy-wide outcomes such as national income, unemployment, and the income distribution	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of assessed students to score above 3 on a 1-4 scoring rubric.	Randomly selected student assignments or exams
6. Understand & Apply: Demonstrate an understanding of the comparative advantage motivations for trade at the individual, business, and international levels.	The threshold value for beginning and developing for this outcome is for 75% of assessed students to score above 1 on a 1-4 scoring rubric. The threshold value for competency and accomplishment for this outcome is for 75% of assessed students to score above 3 on a 1-4 scoring rubric.	Randomly selected student assignments or exams

Section 5. What Was Done?

d) Self-reporting Metric (required answer): Was the completed assessment consistent with the program's assessment plan? If not, please explain the adjustments that were made.

X **Yes** ☐ **No**

e) How was the data collected and analyzed and by whom? Please include method of collection and sample size.

Instructors of ECNS 251 and ECNS 204 gave the RIC a random sample of student work on assignments covering the PLO. In ECNS 251 the artifact was 16 randomly chosen student responses to two problem set questions, each with multiple parts and including both open-ended and true/false with explanations. The assignment was done in Canvas, so the student submissions are reported in a spreadsheet. In ECNS 204, the artifact was 5 randomly chosen student responses to an exam question covering the PLO. The RIC then had Claude assess the student responses relative to the rubric below, provide a numerical summary of the scores and write a summary of the findings.

f) Please provide a rubric that demonstrates how your data was evaluated.

Indicators	**Beginning - 1**	**Developing- 2**	**Competent- 3**	**Accomplished- 4**
Understand & Apply: Demonstrate an	The student shows some basic understanding of opportunity cost	The student identifies comparative advantage from	The student mostly understands how	The student clearly understands how comparative

understanding of the comparative advantage motivations for trade at the individual, business, and international levels	but is unable to identify comparative advantage or explain the gains from trade on their own	opportunity costs, but makes errors in explaining why trade benefits both parties or in applying the idea beyond one level	comparative advantage motivates trade and applies it at more than one level, but makes some minor errors	advantage motivates trade and applies it correctly at the individual, business, and/or international levels

Section 6. What Was Learned.

g) Based on the analysis of the data, and compared to the threshold values established, what was learned from the assessment?

We assessed PLO 6 using 16 randomly selected ECNS 251 problem-set responses and 5 randomly selected ECNS 204 exam responses (21 artifacts in total), scored on the 1-4 rubric in Section 5f. The student artifacts, scores, and brief scoring rationales are in Appendices A-C. The beginning/developing threshold (75% of students scoring above 1) was met in both courses: 94% of ECNS 251 students (15 of 16) and 100% of ECNS 204 students (5 of 5) scored 2 or higher.

The competency threshold (75% of students scoring 3 or higher) was met in ECNS 204, where 80% (4 of 5) reached it. It was not met in ECNS 251, where 62.5% (10 of 16) reached it, or for the combined sample, where 67% (14 of 21) reached it. Score distributions are below. Mean scores were 2.94 for ECNS 251, 3.40 for ECNS 204, and 3.05 combined. Both courses are developing-level courses in this program, so the competency threshold is a stretch target for these students.

Course	**n**	**Score 1**	**Score 2**	**Score 3**	**Score 4**	**% scoring 2+**	**% scoring 3+**
ECNS 251	16	1	5	4	6	94%	62.5%
ECNS 204	5	0	1	1	3	100%	80%
Combined	21	1	6	5	9	95%	67%

h) What areas of strength in the program were identified from this assessment process?

Students in both courses were generally strong on the quantitative mechanics of comparative advantage. Nearly all calculated opportunity costs correctly, identified who has the comparative advantage in each good, and described a trade rate between the two opportunity costs that leaves both parties better off. In ECNS 251, the highest-scoring students (6 of 16 scored 4) explained why trade is mutually beneficial using opportunity cost and applied the idea beyond the textbook example: to individuals deciding how to use their time, to industries facing import competition, and to national-security and distributional concerns about trade.

In ECNS 204, 4 of 5 students scored 3 or higher. The stronger responses worked out the gains from specialization (three more rabbits and one more fish) and drew the combined production possibilities frontier correctly.

i) What areas were identified that either need improvement or could be improved in a different way from this assessment process?

Comparative versus absolute advantage. Six of 16 ECNS 251 students (one of them scoring 1) and one of five ECNS 204 students scored 2 or lower. Several of them identified comparative advantage incorrectly, in some cases by comparing the quantities each person produces rather than their opportunity costs.

Explanations in the true/false items. Some ECNS 251 students reached the right answer without reasoning from opportunity cost. One gave true/false answers with no explanations, and two others gave explanations that did not use the concept (for example, "jack of all trades" or "there is always a loser").

Suggested action for ECNS 251. Add a short in-class or online practice item on comparative versus absolute advantage before Practice Problems 5. Students would compute each person's opportunity cost, name who has the comparative advantage, and write one sentence explaining the answer in terms of opportunity cost. Instructors would also share a short model answer for the true/false item on whether very talented people have a comparative advantage in everything, showing the reasoning and not only "false." The target for the next ECNS 251 assessment of PLO 6 is for at least 75% of sampled students to score 3 or higher, up from 62.5% this cycle.

Section 7. How We Responded.

a) Describe how “What Was Learned” was communicated to the department, or program faculty. How did faculty discussions re-imagine new ways program assessment might contribute to program growth/improvement/innovation beyond the bare minimum of achieving program learning objectives through assessment activities conducted at the course level?

The results were shared with all DAEE faculty, and instructors of ECNS 251 and other courses covering PLO 6 were also sent separate emails summarizing the results.

b) How are the results of this assessment informing changes to enhance student learning in the program?

The ECNS 204 results met the 75% competency threshold. The ECNS 251 results met the beginning/developing threshold but not the competency threshold (62.5% at 3 or higher), which is a stretch target for a developing-level course. In response, ECNS 251 instructors will add a short practice item and model answer on comparative versus absolute advantage before Practice Problems 5 (see Section 6i) and will reassess PLO 6 with a target of 75% scoring 3 or higher during the next cycle the assesses PLO 6.

c) If information outside of this assessment is informing programmatic changes, please describe that.

DAEE exit interviews are in-person interviews offered to graduating ECNS majors each semester by the chair of the Resident Instruction Committee and DAEE Student Success Coordinator. In AY 2025-26, 6 graduates took part. Students are asked about the most and least useful classes in the ECNS curriculum and in the CORE, in overall terms, as well as with respect to writing, communication, and math skills. Students asked what skills they wish they were better trained in, and what courses or topics they with the DAEE offered that it does not currently offer. The Student Success Coordinator then groups the answers by theme and reports them to the RIC and to the faculty. This year, none of the students commented on international trade/comparative advantage, so the RIC could not use exit interview comments alongside the direct evidence in Section 6.

d) What support and resources (e.g., workshops, training, etc.) might you need to make these adjustments?

One month of summer salary for each DAEE faculty member to attend teaching workshops, collaborate on program assessments, and brainstorm plans for the next DAEE 7-year review.

Section 8. Closing the Loop(s).
Reflect on the program learning outcomes, how they were assessed in the previous cycle (refer to #1 of the report), and what was learned in this cycle about any actions stemming from the previous cycle.

a) Self-Reporting Metric (required answer): Based on the findings and/or faculty input, will there be any changes made (such as plans for measurable improvements, realignment of learning outcomes, curricular changes, etc.) in preparation for upcoming assessments?

Yes ☐ **No** ☐ X

b) In reviewing the last report that assessed the PLO(s) in this assessment cycle, what changes proposed were implemented and will be measured in future assessment reports? What action will be taken to improve student learning objectives going forward?

The AY 2024-25 report assessed PLO 5. In ECNS 251, 76% of responses scored competent or accomplished and none scored beginning; the weakest question was on fiscal policy. In ECNS 202, 30% of students scored competent or accomplished and 15% scored beginning on the monetary policy questions. That report proposed no specific changes. Since then, the ECNS 251 instructors have added time on fiscal policy, and ECNS 202 instructors took no specific action. PLO 5 is next scheduled for AY 2029-2030, when the same questions will be reused so results can be compared directly.

c) Have you seen a change in student learning based on other program adjustments made in the past? Please describe the adjustments made and subsequent changes in student learning.

N/A

d) If the program sees anything emerging from this assessment cycle that it anticipates would be a factor or an item of discussion in its 7-year program review cycle, please use this space to document that for future reference.

None

Submit report to programassessment@montana.edu
Update Department program assessment report website.
Update PLO language in CIM if needed (Map PLOs to Course LOs)

Appendix A. Scoring summary and rationales (PLO 6)

Scored by one rater (Claude) on the 1-4 rubric in Section 5f. Competency threshold = 3 or higher. A score of 4 was allowed for correct application at the individual, business and/or international level. Absolute advantage was not scored.

ECNS 251, Practice Problems 5 (16 randomly selected students, anonymized)

Student	Score	Rationale
251-01	3	All Q1 parts correct. Q2 explanations correct and example-based (industries, workers). Minor slip in 2.1 (says CA = 'less resources' rather than lower opportunity cost). Stays 3 because of the 2.1 slip.
251-02	4	All parts correct; clear explanations applied at individual (CEO/typist, coffee), industry (baker) and country levels; nuanced answer on 'always' and 'optimal'.
251-03	1	1.3 gives opportunity cost of a fashion show, not a TV show; 1.5 says Boselli has CA in both (conflates absolute and comparative); 1.6 wrong; Q2 answered 'False' to every item with no explanation (2.1 should be True).
251-04	4	All Q1 correct; Q2 correct with brief but sound reasoning (individual and national/industry level). Explanations short. Rescored 4: concise but correct, applied at individual (office worker/gardener) and national-security levels.
251-05	2	Q1 fully correct. Q2 reasoning shows conceptual errors: 2.2 does not use opportunity cost; 2.3 says 'there is always a loser' (misexplains why trade benefits both).
251-06	4	All correct; reasoning grounded in opportunity cost; examples at PPF/individual, industry (chips) and country levels; 2.4 handled well.
251-07	3	All Q1 correct; Q2 correct but terse; 2.6 hedged ('True and False').
251-08	2	1.5 claims Nessman has CA in both goods by comparing quantities (6<8, 10<16) - conflates absolute and comparative advantage; later answers (2.1, 2.2) show the correct idea, so understanding is inconsistent.
251-09	3	Q1 correct; strong explanations in 2.1-2.5; 2.6 answered 'True' (should be False) though notes real-world caveats.
251-10	3	Q1 correct; Q2 correct, 2.3 explanation somewhat muddled but acceptable; 2.4 thin.
251-11	4	Q1 correct, including a correct worked trade (6 TV for 11 fashion). Q2 correct with applied examples; some loose reasoning in 2.5. Rescored 4: correct worked trade plus applied individual (fisher/cook) and international examples; weak reasoning in 2.5 does not involve CA.
251-12	2	Equations (+20, +32) and 1.3 wrong; 1.4 absolute advantage reversed; 1.6 expressed as unclear inequality. CA in 1.5 correct and Q2 short answers mostly correct; 2.6 hedged. Absolute-advantage answer (1.4) not scored.
251-13	4	Correct and well reasoned throughout (policy goals, distribution), but several numbers/graph values lost in export so 1.2/1.6 can't be fully verified; no explicit individual-level example. Rescored 4: correct and well reasoned at national/distributional levels (some numbers lost in export, so 1.2/1.6 unverifiable).
251-14	2	1.3 units wrong ('1.67 less movies'); 1.4 and 1.5 wrong (misassigns absolute and comparative advantage; 'fewer resources'); 1.6 range correct; 2.1-2.3 correct; 2.4 answered 'true' (wrong). Absolute-advantage answer (1.4) not scored; score based on CA (1.5), OC (1.3) and Q2.

251-15	2	Q1 fully correct. Q2 explanations thin or off-concept (2.2 'jack of all trades'; 2.1 restates claim; 2.5 loosely reasoned).
251-16	4	All correct, thorough; recognizes 'always' is the catch in 2.4; applies ideas to individuals, industries (infant industry, import competition) and national security. (1.4 labels CA under absolute-advantage line, but 1.5 is correct.)

ECNS 204, exam question 4 (5 randomly selected students, anonymized)

Student	Score	Rationale
204-01	4	(a) correct (Bill 1, Ted 6). (b) MCs and comparative advantages correct. (c) specialization by CA, gains +3 rabbits/+1 fish, states absolute advantage doesn't determine specialization; combined PPF drawn. Individual level only. Scored 4: correct and clearly explained at the individual level.
204-02	3	(a),(b) correct incl. table. (c) graph and numbers correct ((5,7)->(8,8)), but no written explanation and nothing on role of absolute advantage.
204-03	4	Thorough and correct: time allocation worked out, MCs, CA, gains (3 rabbits, 1 fish), combined PPF points (0,10),(8,8),(12,0). Does not discuss absolute advantage. Individual level only. Scored 4: correct and clearly explained at the individual level.
204-04	2	MCs and gains computed correctly, but (b) assigns comparative advantage backwards (Ted->rabbits, Bill->fish) and (c) concludes absolute advantage plus specialization drive gains (conflates). Borderline 1/2.
204-05	4	(a),(b),(c) correct; clearly explains each has an absolute advantage yet specialization follows comparative advantage/lowest MC; gains and PPF correct. Individual level only. Scored 4: correct and clearly explained at the individual level.

Appendix B. ECNS 251 student responses (Practice Problems 5)

Responses are reproduced as submitted in Canvas, anonymized. Student numbers match Appendix A. Question numbers follow the exported spreadsheet columns (1.2-1.6 correspond to problem 1, parts b-f; 2.1-2.6 correspond to problem 2, parts a-f). Part 1a (graphs) was not part of the exported data.

Problem 1 setup: In one month, supermodel Simon Nessman can produce 10 fashion shows or 6 TV shows. Supermodel Pietro Boselli can produce 16 fashion shows or 8 TV shows in one month. They both have constant opportunity costs.

Student 251-01 (score 3)

1.2 (1b.)	Nessman: Fashion shows = -5/3(TV shows) +10 Boselli: Fashion shows = -2(TV shows) +16
1.3 (1c.)	The opportunity cost of 1 TV show for Nessman is 5/3 of a fashion shows. The opportunity cost of 1 TV show for Boselli is 2 fashion shows.
1.4 (1d.)	Pietro Boselli has the absolute advantage in producing both TV shows and fashion shows.
1.5 (1e.)	Nessman has a comparative advantage in producing TV shows. Boselli has the comparative advantage in Fashion shows.
1.6 (1f.)	Trading one TV show for 1.8 fashion shows.
2.1 (2a.)	True. If both countries specialize in the good they have a comparative advantage in they will be able to produce that good more efficiently with less resources and then trade with a country who did the same thing to benefit mutually.
2.2 (2b.)	False. You cannot have a comparative advantage in both goods. Opportunity cost determines comparative advantage, so while you may have an absolute advantage, your opportunity cost of producing one good is higher than someone else's, giving them the comparative advantage in that good.
2.3 (2c.)	False. In a trade, each person gets something at a lower opportunity cost than if they made it themselves. If a trade were only good for one party, then nobody would agree to trade.
2.4 (2d.)	False. For the trade to be mutually beneficial, the terms of trade must fall between the two parties opportunity costs.
2.5 (2e.)	False. When trades are made it creates competition within countries. Industries with a comparative advantage expand, while industries without a comparative advantage shrink. It creates tough competition for other businesses in a country when one is specializing and trading to maximize resources. Workers in shrinking industries lose jobs and earn lower wages.
2.6 (2f.)	False. Under ideal conditions, yes, when countries specialize in what they produce at a lower opportunity cost and efficiently trade it maximizes total economic efficiency. However, this does not take into account externalities like pollution, national security concerns, humanity concerns, and transportation costs.

Student 251-02 (score 4)

1.2 (1b.)	Nessman: y = -5/3x +10 Boselli: y = -2x +16

1.3 (1c.)	Nessman: 1.67 fashion shows Boselli: 2 fashion shows
1.4 (1d.)	Pietro Boselli has an absolute advantage in both fashion shows and TV shows.
1.5 (1e.)	TV Shows: Simon Nessman Fashion Shows: Pietro Boselli
1.6 (1f.)	The best trade for Simon to specialize in TV shows and Pietro to specialize in fashion shows. If they trade at a rate of 1 TV show for 1.8 fashion shows, both will end up with more of both goods than they could have ever produced on their own. This moves their consumption outside their individual PPF lines.
2.1 (2a.)	This statement is true because trade is based on comparative advantage, and not absolute advantage. Even if one country is better at making all of the goods, that same country will still face opportunity costs of producing different goods. By focusing on what they are relatively best at and trading for the rest, both countries can consume more than they ever could alone.
2.2 (2b.)	This statement is false. While someone could have an absolute advantage is everything they do or produce, it is basically impossible to have a comparative advantage in everything they do. For example, a CEO who is also the world's fastest typist. If they spend an hour typing, they lose thousands of dollars they would make leading the company. The CEO's assistant, who gives up much less to type, holds the comparative advantage.
2.3 (2c.)	This statement is false, if trade only ended up helping one person, the other person included in the trade would not agree to trade. For example, if you would rather have caffeine than keeping your $5 and the coffee shop would rather have $5 than keeping their coffee beans. Since trade is voluntary, it usually only happens when both sides benefit or are happier than they originally started.
2.4 (2d.)	This statement is false. The word "always" is the catch, because just because one side benefits does not always mean the other side benefits as well. For example, if I were to trade a brand-new car for a pack of gum. It is a great deal for the person who is receiving the car, but a total loss for the person giving it up. A trade is only good for both sides if the price falls within a fair range for everyone involved.
2.5 (2e.)	This statement is false. Trade can make a country wealthier as a whole, it does not mean that every individual benefits from the trade. This is a big picture victory where the average person can benefit, but specific individuals get hit hard. For example, a town where a big, cheap bakery opens. Most people are very happy because bread is now cheaper, but the local baker who can't compete has a potential of losing his business. In this scenario the economic pie gets bigger, but certain individuals slices get much smaller.
2.6 (2f.)	To really dig into why this statement is false, we have to look at the gap between textbook efficiency and real-world survival. While comparative advantage is a brilliant mathematical theory for maximizing production, optimal is actually a value judgement that includes essential things like saftey, the environment, and future growth.

Student 251-03 (score 1)

1.2 (1b.)	**Nessman: y = -5/3x + 10** **Boselli: y = -2x + 16**
1.3 (1c.)	Nessman: 3/5 fashion show Boselli: 1/2 fashion show
1.4 (1d.)	Boselli has an absolute advantage in both.
1.5 (1e.)	Boselli has comparative advantage in both.
1.6 (1f.)	1 fashion show trades for 2.3 TVs
2.1 (2a.)	

2.2 (2b.)	
2.3 (2c.)	
2.4 (2d.)	
2.5 (2e.)	
2.6 (2f.)	

Student 251-04 (score 4)

1.2 (1b.)	**Nessman: F = 10 - 1.67T** **Boselli: F = 16 - 2T**
1.3 (1c.)	Nessman: 1 tv show is 1.67 fashion shows, 1 fashion show is .6 tv shows Boselli: 1 tv show is 2 fashion shows, 1 fashion show is .5 tv shows
1.4 (1d.)	Boselli holds absolute advantage in both categories.
1.5 (1e.)	Nessman has comparative advantage in TV shows Boselli has comparative advantage in fashion shows
1.6 (1f.)	Nessman gets a fashion show for only .55 TV shows and Boselli gets a TV show for only 1.8 fashion shows.
2.1 (2a.)	True. Even the best country has limited time. By trading, they can focus on their best work and let other do what they are worse at which makes everyone richer.
2.2 (2b.)	False. If you work a high paying office job the cost of you mowing your lawn would be a loss because your time is worth more than a gardeners time. A gardener has the advantage because the gardeners time is cheeper than yours.
2.3 (2c.)	False. If a deal didn't benefit both people, they wouldn't agree to do it.
2.4 (2d.)	False. A trade is only good if the price is right to where the trade is good for both parties.
2.5 (2e.)	False. Trade helps the economy but can hurt specific groups or not benefit them at all.
2.6 (2f.)	False. Sometimes a country protects an industry for national security or environmental reasons even if it's more costly.

Student 251-05 (score 2)

1.2 (1b.)	**Nessman: y=-5/3x+10** **Boselli: y=-2x+16**
1.3 (1c.)	Nessman: 1 TV show= 10/6 fashion shows (or 5/3) Boselli: 1 TV show = 2 Fashionshows
1.4 (1d.)	Boselli has the absolute advantage in both.
1.5 (1e.)	Nessman has the comparative advantage in TV shows. Boselli has the comparative advantage in fashion shows.
1.6 (1f.)	Nessman should trade Tv shows to Boselli at a rate of 1.8 fashion shows per Tv show. Since Nessmans opportunity cost of 1 Tv show is 1.67 fashion shows and Bosellis opportunity cost is 2 fashion shows per Tv show, this trade benefits both of them.
2.1 (2a.)	True, absolute advantage does not mean that a country can produce a good for cheaper, it means that the country can produce more of it. If a different country has a comparative advantage in the good there can be benefit in trading for it.

2.2 (2b.)	False, It is impossible for someone to be good at everything they do right off the bat, even if they are incredibly talented they can be out competed by someone who is equally talented or more experienced.
2.3 (2c.)	False, there is always a loser in the sense that someone is making profit of the other, but this does not mean that it is not good for both of them. when two people trade they both get something they need for a better profit.
2.4 (2d.)	False, Trade is only good for both if it is mutually beneficial, if one party is tricking or deceiving the other it can lead to a trade that is not mutually beneficial.
2.5 (2e.)	False, to be good for the country the trade only has to benefit a portion of the country, by benefiting that portion it dos good for the country as a whole but not always the people outside of the group.
2.6 (2f.)	False, trading based on comparative advantage can be mutually beneficial, but trading based on only that can lead to problems. Trading based only on comparative advantage could lead to problems such as overdependency on other nations, and externalities that can cause even more damages.

Student 251-06 (score 4)

1.2 (1b.)	**Nessman: Fashion Shows = (-5/3) (TV Shows) + 10** **Boselli: Fashion Shows = (-2) (TV Shows) + 16**
1.3 (1c.)	Nessman: 1 TV Show = 5/3 Fashion Shows Boselli: 1 TV Show = 2 Fashion Shows
1.4 (1d.)	Boselli has the absolute advantage both in producing TV shows and Fashion shows.
1.5 (1e.)	Boselli has comparative advantage in producing Fashion shows. Nessman has comparative advantage in producing TV Shows.
1.6 (1f.)	A trade where Nessman gives 1 TV Show for 1.8 Fashion Shows from Boselli would increase both their consumptions.
2.1 (2a.)	True, each of the country will have comparative advantage in different goods (unless their ppf is the same), and this comparative advantage allows them both to gain through trade.
2.2 (2b.)	False, comparative advantage is based on tradeoffs, so even if you are talented at producing a good or service, there will still be opportunity costs, which leads to comparative advantage for other individuals in other goods or services.
2.3 (2c.)	False, free and voluntary trade can make both parties better off because of comparative advantage. If they both produce the good they have the lowest opportunity cost to produce, they can exchange to end up with consumption outside their PPF's.
2.4 (2d.)	False, if a person is trading an item for an exchange rate that is lower than the item's opportunity cost to make, then they will not end up better off, even if the other person profits. This could happen if the trade is forced.
2.5 (2e.)	False, free trade creates economic gains overall, but there are still winners and losers within the country. For example, importing a foreign good like chips allows for lower prices for everyday consumers, but local industries that produce chips may not be able to compete with those low prices and may lose out.
2.6 (2f.)	False, it is not always optimal because there are tradeoffs. Too much international trade could lead to overdependency, loss of US jobs, or human rights/ pollution issues.

Student 251-07 (score 3)

1.2 (1b.)	**10-(5x/3)** **16-2x**

1.3 (1c.)	5/3 of a fashion show and 2 fashion shows.
1.4 (1d.)	Boselli has absolute advantage in both.
1.5 (1e.)	Nessman has comparative advantage in TV shows and Boselli has comparative advantage in fashion shows.
1.6 (1f.)	Anywhere between trading 1 TV show for 1.67 and 2 fashion shows.
2.1 (2a.)	True, because trade is based on comparative advantage rather than absolute advantage. This is seen in the previous problems.
2.2 (2b.)	False, because having a comparative advantage depends on an opportunity cost, which is relative.
2.3 (2c.)	False, because trades are usually mutually beneficial. If they weren't, trade would occur significantly less.
2.4 (2d.)	False, because sometimes circumstances can prevent an even trade to occur.
2.5 (2e.)	False, because the person making the trade does not represent the entire country.
2.6 (2f.)	True and False. Each country may benefit from the trade, but this does not account for the everyday citizen in those countries.

Student 251-08 (score 2)

1.2 (1b.)	**Ness: 10 fashion shows/6 TV shows= 1.67 (that is m the slope opportunity cost)** **Equation: 10-(5/3TV)** **Boselli: 16 fashion shows/8 TV shows= 2 (that is m the slope opportunity cost)** **Equation: 16-(2TV)**
1.3 (1c.)	Opportunity Cost for One TV Show Ness: 1.67 fashion shows Boselli: 2 fashion shows
1.4 (1d.)	Boselli has the absolute advantage in BOTH producing Tv shows and fashion shows. TV Shows: 8 (B)> 6 (N) Fashion shows: 16 (B)> 10 (N)
1.5 (1e.)	Comparative advantage is the lower opportunity costs, so.. Nessman has comparative advantage in TV shows: 6 <8 Nessman has comparative advantage in Fashion shows: 10<16 Nessman has comparative advantage in producing both TV shows and fashion shows
1.6 (1f.)	Nessman should specialize in TV shows and Boselli should specialize in fashion shows, so I think a trade involving 1 TV show for 1.8 fashion shows would benefit both because it's between their opportunity costs (1.67 and 2).
2.1 (2a.)	True because even if one country has absolute advantage in everything, trade can still happen because of comparative advantage.
2.2 (2b.)	False because even someone super talented still faces opportunity costs, so they can't have a comparative advantage in everything.
2.3 (2c.)	False because if trade came to an agreement, both people will expect to benefit.
2.4 (2d.)	False, because sometimes trade can benefit one side more than the other, especially if there is clear power unequalness.
2.5 (2e.)	False, because trade can make a country better off overall, but some groups can definitely be affected for the worse (like workers).
2.6 (2f.)	False because comparative advantage increases efficiency, but there can always be downsides like inequality or externalities coming into play.

Student 251-09 (score 3)

1.2 (1b.)	**Nessman: y=-5/3x+10** **Boselli: y=-2x+16**
1.3 (1c.)	Nessman: 1 TV show = 5/3 Fashion show (1.67) Boselli: 1 TV Show = 2 Fashion shows
1.4 (1d.)	Boselli has absolute advantage in producing both TV shows and Fashion shows
1.5 (1e.)	Nessman has comparative advantage in producing TV shows, and Boselli has comparative advantage in producing Fashion shows.
1.6 (1f.)	The trade for 1 TV show would have to be between 1.67 and 2 Fashion shows. A trade that would increase consumption beyond both their PPFs would be 1 TV show for 1.8 Fashion shows.
2.1 (2a.)	This is true. While one country might have absolute advantage in the production between two traded goods, both countries have comparative advantage in the production of one of the goods.
2.2 (2b.)	This statement would be false because comparative advantage is determined by the efficiency in the production of a good or service. It comes from producing something at a lower opportunity cost.
2.3 (2c.)	This statement is false in most cases. Most of the time, trade is voluntary as it is going to benefit both parties. The exchange wouldn't be agreed to if one party felt they weren't benefitting from it. This is also supported by the idea of comparative advantage, where within a trade, each party has comparative advantage in one of the produced goods.
2.4 (2d.)	This is also false. In most cases it is true, as people wouldn't typically agree to trade if they didn't benefit from it, however the word "always" throws it off from being entirely accurate. There are cases in which fraud, externalities, or unequal knowledge all play a role in trade, which can con one party.
2.5 (2e.)	This is false. There are winners and losers when it comes to international trade, the winners being consumers who can purchase cheaper goods, and the losers being industries trying to keep up with imported prices. This can create job loss and lower wages.
2.6 (2f.)	This statement is true because international trade increases a countries total output and gives countries the opportunity to consume beyond initial production levels. It's the most efficient form of trade. In the real world it's not always optimal, but according to comparative advantage it is.

Student 251-10 (score 3)

1.2 (1b.)	**Boselli: y=-2x+16** **Nessman: y=-5/3x+10**
1.3 (1c.)	Nessman: 5/3 fashion shows Boselli: 2 fashion shows
1.4 (1d.)	Boselli has absolute advantage in both since he can produce more of either in a given month.
1.5 (1e.)	Nessman has comparative advantage in producing TV shows, Boselli has comparative advantage in fashion shows.
1.6 (1f.)	Boselli could have Nessman produce TV shows for him, and would produce more than 5/3 but less than 2 fashion shows in trade for Nessman producing him 1 TV show.
2.1 (2a.)	True, because just because they can produce the most goods, that doesn't mean someone can't produce a given good for less, so then they could trade.
2.2 (2b.)	False, becasue if they have comparative advantage in one task out of two, they will not have the advantage in the other task.
2.3 (2c.)	False, because when looking at 2 products, someone who has comparative advantage in one does not have comparative advantage in the other, thus it benefits both to trade.
2.4 (2d.)	False, one party could agree to sub-optimal terms.

2.5 (2e.)	False, trades can benefit only some groups, such as only the elites or only the workers.
2.6 (2f.)	False, because trading via comparative advantage may help the country but my leave workers in certain industries out of a job.

Student 251-11 (score 4)

1.2 (1b.)	**Nessman Equation- y=(-5/3)x+10** **Boselli Equation- y=-2x+16**
1.3 (1c.)	Nessman- 5/3 Fashion Shows Boselli- 2 Fashion shows
1.4 (1d.)	Pietro Boselli has an absolute advantage in both producing TV shows and Fashion shows.
1.5 (1e.)	Nessman has comparative advantage in producing TV shows and Boselli has comparative advantage in producing Fashion Shows.
1.6 (1f.)	If Nessman produced 6 TV shows and Boselli produced 16 fashion shows they could then trade for a net profit for both sides. Nessman could trade all 6 of his TV shows for 11 of Boselli's fashion shows. This would mean that Nessman has 11 fashion shows which is more than he would have been able to produce and 0 TV shows. Boselli would have 5 fashion shows and 6 TV shows which is also more than he would have been able to produce by himself.
2.1 (2a.)	This statement is true as we saw in the example above. Although one country may have absolute advantage in producing both products the countries can have different comparative advantages meaning although one country may overall produce less of one product, they can still produce one of the products more efficiently than the other country. If both countries choose to produce the product that they are most efficient in making then they can trade with each other and both benefit.
2.2 (2b.)	I think this is hard to have an absolute answer for but realistically each person has a comparative advantage in at least one thing. No one person can be the most efficient at doing everything out there, it's just not possible. No one can produce their own milk and make it into yogurt and then add flavoring and have vanilla yogurt, there are just too many steps in the process where someone else could do it more efficiently because they are focusing on only doing a lot of that task.
2.3 (2c.)	I think this statement is false because we have seen examples of trade between regions in which both parties benefit because of comparative advantage. Just because one person is profiting from a trade does not mean that the other trading partner is losing out on the deal. If someone is really good at fishing and someone is really good at cooking, they can trade each other's skills to benefit both people. The fisherman provides the fish to cook and in return gets a well-made meal while the cook provides the cooking and in return gets the food source from which to make the meal.
2.4 (2d.)	This statement is also false because there are many examples in which only one side of the trade profits. For example, after we arrested the president of Venezuela we have been engaging in oil trades with them. Normally this would be somewhat profitable for both sides but in this case, we are pressuring Venezuela into trading their oil with us for very cheap, essentially, they are making almost no money off of the oil that they would normally be selling for much more. This is very good for us, but it does not really benefit Venezuela because they could be making much more money if not for their forced deals with us.
2.5 (2e.)	This statement is also usually false because everyone in a state or country can be affected differently by the country's trades. For example, the country itself may profit off of a trade, but the working class may be negatively affected because they are forced to work harder while the government does not return the benefits to them.
2.6 (2f.)	I don't think this statement is always true because trade can be affected by many more factors than just how efficient an economy is at producing something. Many other things go into trading between countries like transportation costs, insurance costs, and protecting trade waters in order to trade with other countries. All of these extra factors make trading not always the best way to go and

	sometimes it is important for countries to not rely on trading internationally as much so that they can focus on building their own domestic economy to make sure that they can be self sufficient and self dependent in times of need.

Student 251-12 (score 2)

1.2 (1b.)	**N = -5/3x+20** **B = -2x+32**
1.3 (1c.)	N = 18 1/3 fashion shows B = 30 fashion shows
1.4 (1d.)	TV = Boselli Fashion = Nessmen
1.5 (1e.)	TV = Nessmen Fashion = Boselli
1.6 (1f.)	For TV shows: 3/5 FS<=1TV<=2FS For Fashion shows: 5/3TV<=1FS<=1/2TS
2.1 (2a.)	True, all that matters is that one country has comparative advantage in some goods.
2.2 (2b.)	False, its not possible to have comparative advantage over everything.
2.3 (2c.)	False, when to comes to trade, each party is able to negotiate their terms (based on comparative advantage).
2.4 (2d.)	False, there is a negotiation that occurs. There might be one party who does not benefit as much as the other party.
2.5 (2e.)	False, trade that benefits the country might hurt individuals. For example, car manufacturers who work in the US might be hurt by the cars imported.
2.6 (2f.)	Not necessarily true or false. It depends on the trade that is happening.

Student 251-13 (score 4)

1.2 (1b.)	**Nessman:** **F=10-5/3** **Boselli:** **F=16-2T**
1.3 (1c.)	Nessman= ~1.67 fashion show/tv show Boselli= 2 fashion shows/tv show
1.4 (1d.)	Boselli has absolute advantage in both.
1.5 (1e.)	Comparative advantage = lower opportunity cost. • TV shows: Nessman: fashion per TV. Boselli: fashion per TV. N. has comparative advantage in TV shows.

	• Fashion shows: Flip the logic: Boselli gives up fewer TV shows per fashion show. Boselli has comparative advantage in fashion shows.
1.6 (1f.)	Let them specialize according to comparative advantage: • Nessman: produce only TV • Boselli: produce only fashion Total production: . Now pick a trade so each consumes a bundle outside their own PPF. Example trade: • Nessman exports 4 TV shows to Boselli. • Boselli exports 7 fashion shows to Nessman. Final consumption: • Nessman: starts at , after trade . His PPF at •He consumes=outside his PPF. • Boselli: starts at , after trade . His PPF at He consumes= outside his PPF. So both gain from trade.
2.1 (2a.)	True. Gains comes from comparative advantage (low opportunity cost) not absolute advantage. Even if one country is better at everything, opportunity costs differ, so both can gain by specializing and trading.
2.2 (2b.)	False. Comparative advantage is relative. If someone has a lower opportunity cost in one activity, they must have a higher opportunity cost in at least one another. You are cannot have comparative advantage in everything.
2.3 (2c.)	False. In standard economics, voluntary trade occurs if both parties except to be better off (or at least not worse off). Trade can be mutually beneficial.
2.4 (2d.)	False. In theory, voluntary trade suggests mutual gain, but in reality there can be: • Asymmetric information, coercion, or misperceptions. • Externalities that hurt third parties. So a trade being good for one does not guarantee it is good for the other.
2.5 (2e.)	False. Trade can raise overall national welfare while harming specific groups (e.g., workers in import-competing industries). Winners and losers both exist; distribution matters.
2.6 (2f.)	False. Comparative advantage is powerful, but: • Externalities, market failures, environmental costs, and distributional concerns can make the free-trade outcome not socially optimal. • Policy goals (equity, security, environment) may justify deviations.

Student 251-14 (score 2)

1.2 (1b.)	**y=-5/3x+10 is the equation for Nessman** **y=-2x+16 is the equation for Boselli**

1.3 (1c.)	For every 1 show Nessman produces, he produces 1.67 less movies. For every 1 show Boselli produces, he produces 2 less movies
1.4 (1d.)	Boselli has an absolute advantage in TV shows and Nessman in Fashion shows.
1.5 (1e.)	Boselli has a comparative advantage as it takes less resources for them to produce these shows.
1.6 (1f.)	Anything between 1.67 Fashion shows< 1 TV show< 2 Fashion shows 1.75 fashion shows for every TV show If Nessman trades 4 fashion shows for 7 TV shows
2.1 (2a.)	true, because gains are based on comparative advantage not absolute. Specializing will help both countries produce outside of the PPF.
2.2 (2b.)	False, as comparative advantage describes low opportunity cost not the most production or efficiency.
2.3 (2c.)	False because if one side wouldn't benefit from it then that trade wouldn't happen.
2.4 (2d.)	true, one person might have a higher benefit, but both will still gain from the trade in a way.
2.5 (2e.)	False, The benefits are not equal, as producers in that industry are taking a loss
2.6 (2f.)	False, as trade doesn't guarantee that both side will equally gain from that trade.

Student 251-15 (score 2)

1.2 (1b.)	**Nessman: F=10-(5/3)T** **Boselli: F=16-2T**
1.3 (1c.)	Nessman: 1.67 fashion shows per TV show Boselli: 2 fashion shows per TV show
1.4 (1d.)	Boselli has absolute advantage in both.
1.5 (1e.)	Nessman has comparative advantage in producing TV shows. Boselli has comparative advantage in producing fashion shows.
1.6 (1f.)	Nessman gives 1 TV show and Boselli gives 1.8 fashion shows.
2.1 (2a.)	True because comparative advantage determines gains from trade.
2.2 (2b.)	False because even if someone appears to be good at everything, they may not be the best at everything (or anything for that matter. There's some validity to the statement "A Jack of all trades is a master of none.").
2.3 (2c.)	False because the trade is voluntary. Both parties choose to weigh the value of the trade.
2.4 (2d.)	False because the other person may have been coerced.
2.5 (2e.)	False because it can hurt certain people groups working in specific industries. For example, in a global economy, smaller businesses have a harder time succeeding because larger corporations have a broader reach and thus more resources to offer.
2.6 (2f.)	False because certain externalities can make over-reliance on international trade more of a disadvantage than an advantage.

Student 251-16 (score 4)

1.2 (1b.)	**F --> Fashion Shows** **T --> TV Shows** **Nessmans's PPF: F = 10 - 5/3T** **Boselli's PPF: F = 16 - 2T**
1.3 (1c.)	Op. Cost Nessman: 5/3 Fashion Shows Op. Cost Boselli: 2 Fashion Shows

1.4 (1d.)	Absolute Advantage: Boselli Comparative Advantage: Boselli
1.5 (1e.)	TV shows: Nessman Fashion shows: Boselli
1.6 (1f.)	A trade that would result in increased consumption beyond Nessman's and Boselli's PPF would be between their opportunity costs of one TV, so lets say 1.8 Fashion shows per 1 TV show. So a specific example would be for Nessman to trade Boselli 3 TV shows for 5.4 fashion shows.
2.1 (2a.)	I think this is true because the comparative advantage matters more. Even if one country has the absolute advantage in producing every product it would still accumulate the most benefits by specializing in the goods that it produces more efficiently by comparison (lower op. cost), and both countries can gain from specializing and exchange.
2.2 (2b.)	I think this is obviously false because even people who are very talented have op. costs. Being better at everything would mean that someone has absolute advantage but they still have varying opportunities costs depending on what the thing is. No one has comparative advantage in everything.
2.3 (2c.)	This is false because usually voluntary trade only occurs when bot parties expect a benefit. If someone in the trade didn't benefit then why would they agree to the trade. Mutual gains are typical in trades.
2.4 (2d.)	I also think this is false because even though trade is usually mutually beneficial it isn't always "good" for both parties. There can be circumstances where there is misunderstanding or unequal bargaining power. I think "always" is too much of a blanket statement.
2.5 (2e.)	This is false because while trade can increase the total national income it can hurt other individuals or industries. This can be seen in the U.S within certain fields where workers may lose jobs or face lower wages due to import competition. Trading just like most economic happenings leads to winner and losers.
2.6 (2f.)	I think this is false because with trade there can be national security concerts and it can also harm infant industries. Real-world conditions can make trading more complicated even when there is technically a comparative advantage.

Question key

1.2: 1b. Write the equations for the PPFs for Nessman and Boselli.

1.3: 1c. What is the opportunity cost of producing one TV show for Nessman? Boselli?

1.4: 1d. Who has absolute advantage in producing TV shows? Fashion shows?

1.5: 1e. Who has comparative advantage in producing TV shows? Fashion shows?

1.6: 1f. Suggest a trade that would increase consumption beyond Nessman's and Boselli's PPFs.

2.1: 2a. "Two countries can achieve gains from trade even if one of the countries has an absolute advantage in the production of all goods." True or false? Explain.

2.2: 2b. "Certain very talented people have a comparative advantage in everything they do." True or false? Explain.

2.3: 2c. "If a trade is good for one person, it can't be good for the other person." True or false? Explain.

2.4: 2d. "If a trade is good for one person, it is always good for the other person." True or false? Explain.

2.5: 2e. "If trade is good for a country, it must be good for everyone in the country." True or false? Explain.

2.6: 2f. "International trade according to comparative advantage is always optimal." True or false? Explain.

Appendix C. ECNS 204 student exam responses (question 4)

Exam question 4: Bill and Ted find themselves on a deserted island. The only two activities available are fishing and hunting rabbits. In a full day, Bill can catch 2 fish or 8 rabbits; in the same time, Ted can catch 8 fish or 4 rabbits. Activities can be divided with no loss of efficiency. When left to their own devices, Bill consumes 4 rabbits and Ted consumes 1 rabbit. (a) Given their current rabbit consumption, how many fish can each person consume, acting alone? (b) What are each individual's marginal costs of fishing and hunting rabbits? Who has the comparative advantage in fishing? In hunting? (c) Explain how Bill and Ted can improve their standard of living through specialization. That is, what are their gains from specialization? What role, if any, does one person's absolute advantage play in your answer? Also, illustrate graphically the combined production possibility frontier along with the bundle of goods in the economy when they specialize and the bundle of goods without specialization.

Student 204-01 (score 4) original scan: IMG_0142.jpg

4.) Bill and Ted find themselves on a deserted island. The only two activities available are fishing and hunting rabbits. In a full day, Bill can catch 2 fish or 8 rabbits; in the same time, Ted can catch 8 fish or 4 rabbits. Activities can be divided with no loss of efficiency. When left to their own devices, Bill consumes 4 rabbits and Ted consumes 1 rabbit.

a.) (5 points) Given their current rabbit consumption, how many fish can each person consume, acting alone?

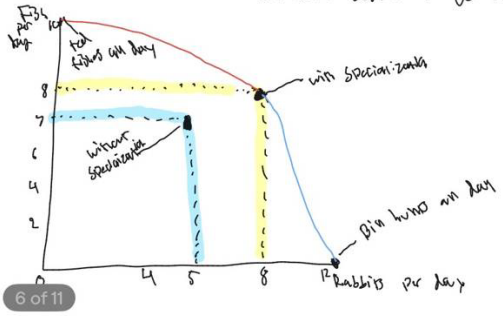
Bill: 1 fish
ted: 6 fish

b.) (5 points) What are each individual's marginal costs of fishing and hunting rabbits? Who has the comparative advantage in fishing? In hunting?

Bills MC is 4 rabbits per fish and 1/4 fish per rabbit
Ted one is 1/2 rabbit per fish and 2 fish per rabbit
Ted has comparative advantage in fishing bill has it in hunting

c.) (5 points) Explain how Bill and Ted can improve their standard of living through specialization. That is, what are their gains from specialization? What role, if any, does one person's absolute advantage play in your answer? Also, illustrate graphically the combined production possibility frontier (ppf) along with the bundle of goods in the economy when they specialize and the bundle of goods without specialization. (Note: For the ease of grading this problem, please put fish on the vertical axis and rabbits on the horizontal axis).

They can improve living by specialization according to comparative advantage. Bill should specialize in hunting and ted in fishing. with specialization they produce 8 fish and 8 rabbits and gain an additional 3 rabbits and 1 fish, absolute advantage doesn't determine specialization. Comparatives does.



Student 204-02 (score 3) original scan: IMG_2125.jpeg

4.) Bill and Ted find themselves on a deserted island. The only two activities available are fishing and hunting rabbits. In a full day, Bill can catch 2 fish or 8 rabbits; in the same time, Ted can catch 8 fish or 4 rabbits. Activities can be divided with no loss of efficiency. When left to their own devices, Bill consumes 4 rabbits and Ted consumes 1 rabbit.

a.) (5 points) Given their current rabbit consumption, how many fish can each person consume, acting alone?

Bill: Consumes 1 fish & 4 rabbits

Ted: Consumes 6 fish & 1 rabbit

b.) (5 points) What are each individual's marginal costs of fishing and hunting rabbits? Who has the comparative advantage in fishing? In hunting?

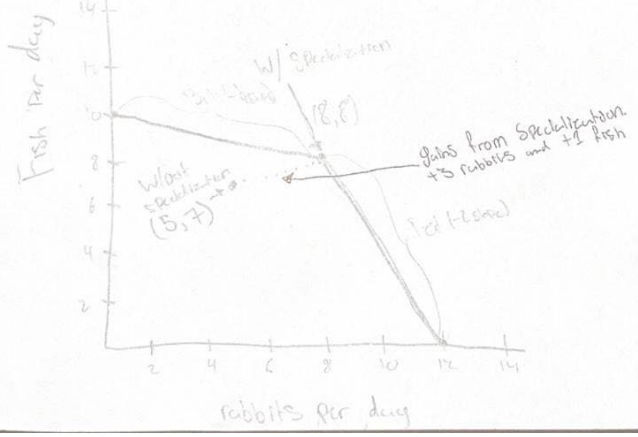
	MC fish	MC rabbit
Bill	4 rabbits	1/4 fish
Ted	1/2 rabbit	2 fish

Ted has comparative advantage in fishing, & Bill has the comparative advantage hunting

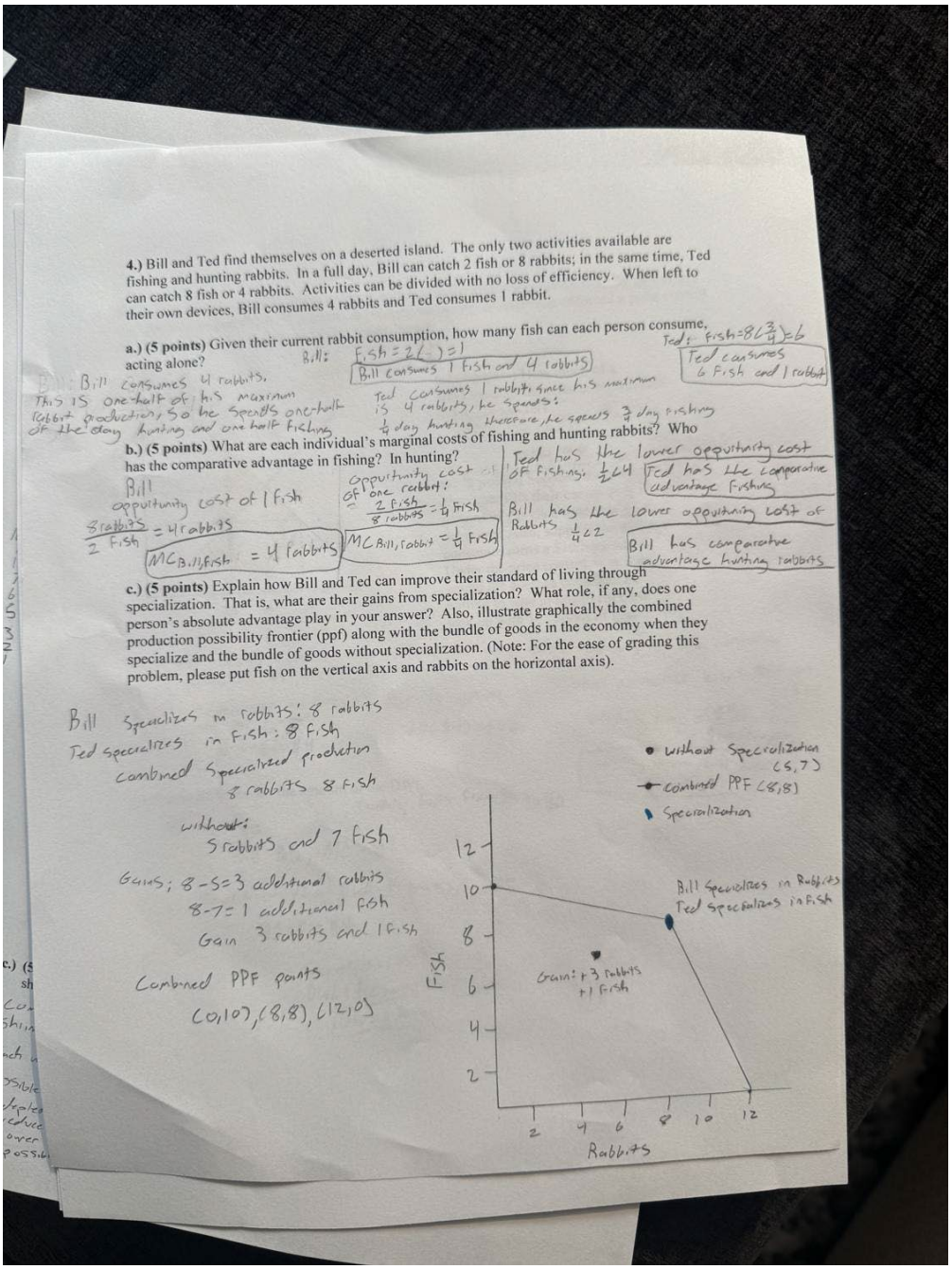
c.) (5 points) Explain how Bill and Ted can improve their standard of living through specialization. That is, what are their gains from specialization? What role, if any, does one person's absolute advantage play in your answer? Also, illustrate graphically the combined production possibility frontier (ppf) along with the bundle of goods in the economy when they specialize and the bundle of goods without specialization. (Note: For the ease of grading this problem, please put fish on the vertical axis and rabbits on the horizontal axis).

Combined ppf for Bill & Ted

Specializing gives 3 more rabbits and 1 more fish per day.



Student 204-03 (score 4) original scan: IMG_2458.jpeg



4.) Bill and Ted find themselves on a deserted island. The only two activities available are fishing and hunting rabbits. In a full day, Bill can catch 2 fish or 8 rabbits; in the same time, Ted can catch 8 fish or 4 rabbits. Activities can be divided with no loss of efficiency. When left to their own devices, Bill consumes 4 rabbits and Ted consumes 1 rabbit.

a.) (5 points) Given their current rabbit consumption, how many fish can each person consume, acting alone?

Bill: Fish = 2(½) = 1
Bill consumes 1 fish and 4 rabbits

Ted: Fish = 8(¾) = 6
Ted consumes 6 Fish and 1 rabbit

Bill: Bill consumes 4 rabbits, This is one-half of his maximum rabbit production, so he spends one-half of the day hunting and one half fishing

Ted consumes 1 rabbit since his maximum is 4 rabbits, he spends: ¼ day hunting therefore, he spends ¾ day fishing

b.) (5 points) What are each individual's marginal costs of fishing and hunting rabbits? Who has the comparative advantage in fishing? In hunting?

Bill opportunity cost of 1 Fish: 8 rabbits / 2 Fish = 4 rabbits
MC Bill, Fish = 4 rabbits

Opportunity cost of one rabbit: 2 Fish / 8 rabbits = ¼ Fish
MC Bill, rabbit = ¼ Fish

Ted has the lower opportunity cost of Fishing: ¼ < 4
Ted has the comparative advantage Fishing

Bill has the lower opportunity cost of Rabbits ¼ < 2
Bill has comparative advantage hunting rabbits

c.) (5 points) Explain how Bill and Ted can improve their standard of living through specialization. That is, what are their gains from specialization? What role, if any, does one person's absolute advantage play in your answer? Also, illustrate graphically the combined production possibility frontier (ppf) along with the bundle of goods in the economy when they specialize and the bundle of goods without specialization. (Note: For the ease of grading this problem, please put fish on the vertical axis and rabbits on the horizontal axis).

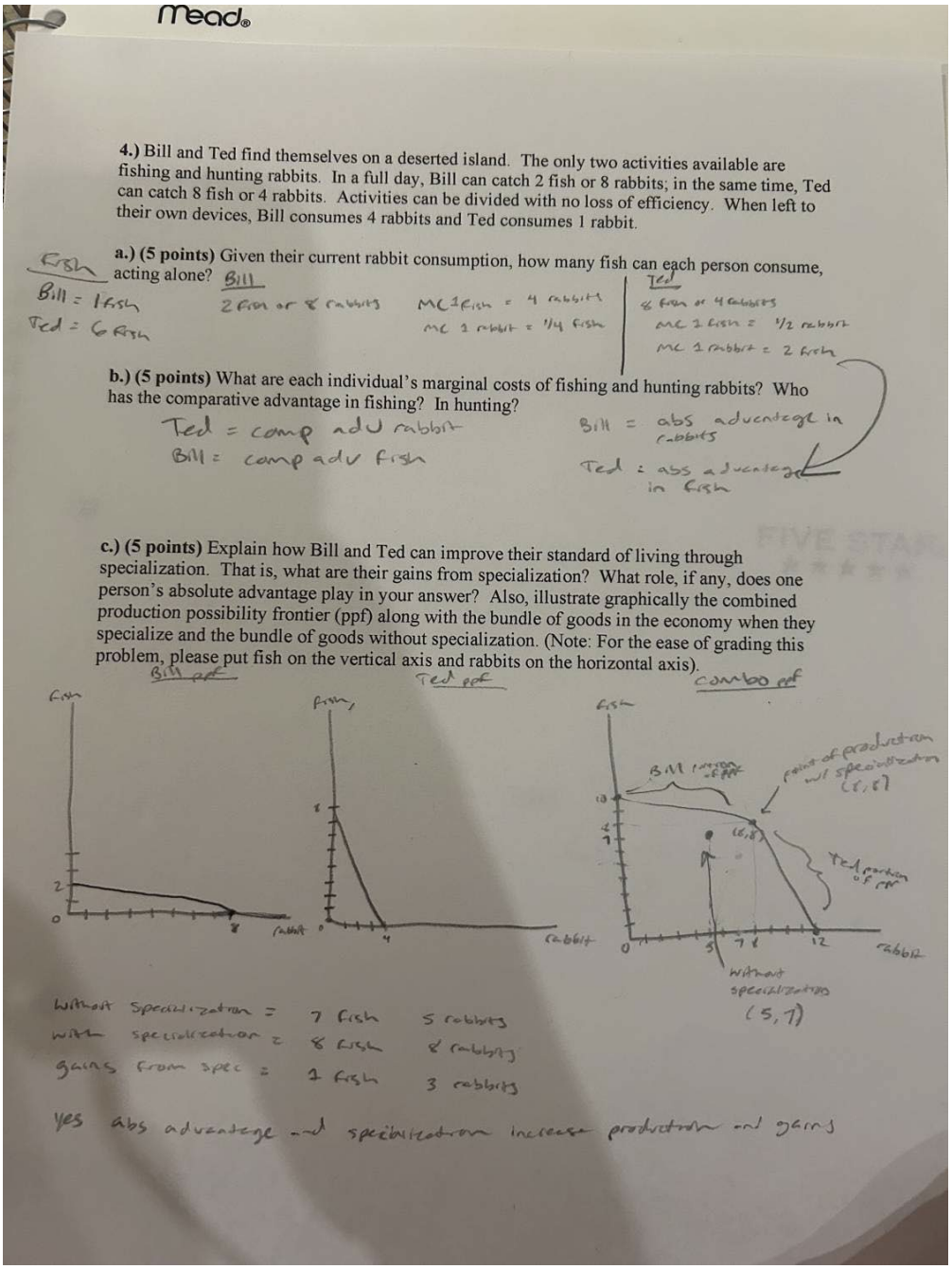
Bill specializes in rabbits: 8 rabbits
Ted specializes in Fish: 8 Fish
Combined Specialized production
8 rabbits 8 Fish

without:
5 rabbits and 7 Fish

Gains; 8 − 5 = 3 additional rabbits
8 − 7 = 1 additional fish
Gain 3 rabbits and 1 Fish

Combined PPF points
(0,10), (8,8), (12,0)

Student 204-04 (score 2) original scan: IMG_4830.jpeg



Student 204-05 (score 4) original scan: IMG_8058.jpeg

4.) Bill and Ted find themselves on a deserted island. The only two activities available are fishing and hunting rabbits. In a full day, Bill can catch 2 fish or 8 rabbits; in the same time, Ted can catch 8 fish or 4 rabbits. Activities can be divided with no loss of efficiency. When left to their own devices, Bill consumes 4 rabbits and Ted consumes 1 rabbit.

a.) (5 points) Given their current rabbit consumption, how many fish can each person consume, acting alone?

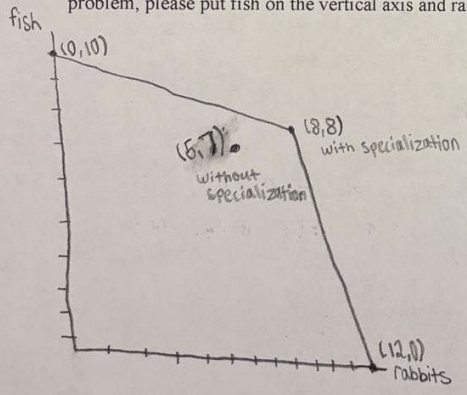
Bill	Ted
$MC_{rabbit} = 0.25$ fish	$MC_{rabbit} = 2$ fish
$MC_{fish} = 4$ rabbits	$MC_{fish} = 0.5$ rabbit

- Bill can consume 1 fish given consumption of 4 rabbits. With 4/8 left after 4 rabbits, that's 1 fish that can be caught.
- Ted can consume 6 fish because he has 3/4 left after consuming 1 rabbit.

b.) (5 points) What are each individual's marginal costs of fishing and hunting rabbits? Who has the comparative advantage in fishing? In hunting?

Ted has comparative advantage in fishing because his marginal cost of producing 1 fish is only 0.5 rabbits compared to 4 rabbits given up for Bill. Bill's comparative advantage is in hunting rabbits since his marginal cost is just 0.25 fish compared to 2 fish for Ted.

c.) (5 points) Explain how Bill and Ted can improve their standard of living through specialization. That is, what are their gains from specialization? What role, if any, does one person's absolute advantage play in your answer? Also, illustrate graphically the combined production possibility frontier (ppf) along with the bundle of goods in the economy when they specialize and the bundle of goods without specialization. (Note: For the ease of grading this problem, please put fish on the vertical axis and rabbits on the horizontal axis).



Their gains from specialization are 3 additional rabbits and 1 additional fish. Bill without specialization could produce 4 rabbits and Ted could get 1 (5 rabbits total) and Bill could produce 1 fish while Ted got 6 (7 rabbits total). With specialization, Bill catches 8 rabbits and Ted 8 fish.

Bill has the absolute advantage in rabbit production and Ted has the absolute advantage in fish production. Despite each person's absolute advantages in production, each person's specialization occurs because of their comparative advantages and who had the lowest marginal costs.