SPLITTING GDP

Grade level: 9 - 12

Relevant standards
CEE National Standards: 18 - Economic Fluctuations
AP Macroeconomics Standards: Unit II - Measure of Economic Performance
This assignment is a short quiz that can be assigned in class or for homework. It is intended to have students apply their understanding of the national expenditures approach. It is included in our three-lesson long GDP Lesson Plan.

OBJECTIVE
Students use their knowledge of the expenditure approach to classify expenses under consumption, investment, government spending, or net exports. Students also predict the overall effect of economic exchanges on GDP.

DIRECTIONS
For each transaction, students should circle the relevant category of GDP (C, I, G, or NX) affected and draw an up or down arrow to indicate whether the category has increased or decreased. Students should then indicate whether the overall GDP of the country has increased, decreased, or remains unchanged. If prices are given, students should indicate by how much GDP increases or decreases.

USA: C I G NX Overall Change: ________________

2. Ronald, who is a US citizen living in Delaware, buys a new car in Newark, DE which was built by a firm based in Mexico.

USA: C I G NX Overall Change: ________________
Mexico: C I G NX Overall Change: ________________

3. Maple Leaf Steel Corporation (a Canadian company) purchases $10 million worth of machinery for its factory. Assume the machinery was produced in Germany.

Canada: C I G NX Overall Change: ________________
Germany: C I G NX Overall Change: ________________

4. The city of Omaha, NE purchases a new, German-made bus for $150,000.

USA: C I G NX Overall Change: ________________
Germany: C I G NX Overall Change: ________________

5. Ohio State University, a public school, builds a new library for $20 million.

USA: C I G NX Overall Change: ________________

6. Aunt Jane buys a new home in Ann Arbor, MI in this year for $600,000. The home was built this year, using $40,000 worth of bricks produced in Canada this year.

USA: C I G NX Overall Change: ________________
Canada: C I G NX Overall Change: ________________

USA: C I G NX Overall Change: ________________

8. Rhonda gets a $60 massage at her local spa.

USA: C I G NX Overall Change: ________________


USA: C I G NX Overall Change: ________________

France: C I G NX Overall Change: ________________

10. You use $7 worth of office supplies you have lying around to make a homemade calendar for your personal use.

USA: C I G NX Overall Change: ________________

11. Isaiah, who lives in Chicago, commissions market research for his business. He hires two contractors who split the work evenly. He pays them $4000. One of the contractors lives in San Diego, CA, the other in St. Petersburg, Russia.

USA: C I G NX Overall Change: ________________

Russia: C I G NX Overall Change: ________________

12. Elaine pays a designer a $3000 flat fee for making a website for her startup.

USA: C I G NX Overall Change: ________________


USA: C I G NX Overall Change: ________________
14. You buy a $100 outfit in the U.S. that was made half in Panama and half in Brazil.

USA: C I G NX Overall Change: ________________

Brazil: C I G NX Overall Change: ________________

Panama: C I G NX Overall Change: ________________


USA: C I G NX Overall Change: ________________

Spain: C I G NX Overall Change: ________________
ANSWER KEY


USA: C↑ I G NX Overall Change: **GDP increases**
(USA consumption increases, so GDP increases.)

2. Ronald, who is a US citizen living in Delaware, buys a new car in Newark, DE which was built by a firm based in Mexico.

USA: C↑ I G NX↓ Overall Change: **No change**
(USA consumption increases, but NX decreases because the car was imported, so GDP is unchanged.)

Mexico: C I G NX↑ Overall Change: **GDP increases**
(Mexico’s NX increases, as the car represents an export, so GDP increases.)

3. Maple Leaf Steel Corporation (a Canadian company) purchases $10 million worth of machinery for its factory. Assume the machinery was produced in Germany.

Canada: C I↑ G NX↓ Overall Change: **No change**
(Canada’s investment increases, but NX decreases because the machinery was imported, so GDP is unchanged.)

Germany: C I G NX↑ Overall Change: **GDP increases by $10 million**
(Germany’s NX increases because the machinery is an export, so GDP increases.)

4. The city of Omaha, NE purchases a new, German-made bus for $150,000.

USA: C I G↑ NX↓ Overall Change: **No change**
(USA’s government purchases increase, but NX decreases because the bus was imported, so GDP is unchanged.)

Germany: C I G NX↑ Overall Change: **GDP increases by $150,000**
(Germany’s NX increases because the bus is an export, so GDP increases.)

5. **Ohio State University**, a public school, builds a new library for $20 million.

USA: C I G ↑ NX Overall Change: **GDP increases by $20 million**

(USA’s government purchases increase, so GDP increases.)

6. Aunt Jane buys a new home in Ann Arbor, MI in this year for $600,000. The home was built this year, using $40,000 worth of bricks produced in Canada this year.

USA: C I ↑ G NX ↓ Overall Change: **GDP increases by $560,000**

(USA’s investment increases by $600,000, since residential housing construction is accounted for in investment. NX decreases as $40,000 worth of bricks were imported from Canada, so GDP increases by $560,000)

Canada: C I G NX ↑ Overall Change: **GDP increases by $40,000**

(Canada’s NX increases because of the exported bricks, so GDP increases by $40,000.)


USA: C I G NX Overall Change: **No change**

(The purchase of used items is not included in GDP, as this would amount to double counting.)

8. Rhonda gets a $60 massage at her local spa.

USA: C ↑ I G NX Overall Change: **GDP increases by $60**

(USA’s consumption increases, so GDP increases.)


USA: C I G NX ↑ Overall Change: **GDP increases**
(USA’s NX increases because the textbooks are exports, so GDP increases.)

France:  C  I ↑  G  NX ↓  Overall Change: **No change**  
(France’s investment spending increases, but NX decreases because the expense is an import, so there is no change.)

10. You use $7 worth of office supplies you have lying around to make a homemade calendar for your personal use.

USA:  C  I  G  NX  Overall Change: **No change**  
(The good is not sold in a market, so it is not factored into GDP.)

11. Isaiah, who lives in Chicago, commissions market research for his business. He hires two contractors who split the work evenly. He pays them $4000. One of the contractors lives in San Diego, CA, the other in St. Petersburg, Russia.

USA:  C  I ↑  G  NX ↓  Overall Change: **GDP increases by $2000**  
(The market research is a $4000 investment increase. Because half of that was imported, NX decreases by $2000. GDP increases by $2000.)

Russia:  C  I  G  NX ↑  Overall Change: **GDP increases by $2000**  
(The half of the $4000 service is exported by Russia, so GDP increases by $2000.)

12. Elaine pays a designer a $3000 flat fee for making a website for her startup.

USA:  C  I ↑  G  NX  Overall Change: **GDP increases by $3000**  
(This is an investment expense, so GDP increases.)


USA:  C ↑  I  G  NX  Overall Change: **GDP increases by $38**  
(Consumption increases by the cost of the good and the delivery service, so GDP increases by $38.)

14. You buy a $100 outfit in the U.S. that was made half in Panama and half in Brazil.
USA: \( C \uparrow \quad I \quad G \quad NX \downarrow \) Overall Change: **No change**
(Consumption increases by $100, but the same amount is subtracted from NX because the outfit is an import, so there is no change.)

Brazil: \( C \quad I \quad G \quad NX \uparrow \) Overall Change: **GDP increases by $50**
(Half the outfit is a Brazilian export, so Brazil’s NX goes up by $50.)

Panama: \( C \quad I \quad G \quad NX \uparrow \) Overall Change: **GDP increases by $50**
(Half the outfit is a Panamanian export, so Brazil’s NX goes up by $50.)

**15. Zoe buys a Picasso painting, originally painted in Madrid, at an auction in New York.**

USA: \( C \quad I \quad G \quad NX \) Overall Change: **No change**
(The painting does not count toward GDP because it was not produced this year.)

Spain: \( C \quad I \quad G \quad NX \) Overall Change: **No change**
(The painting does not count toward GDP because it was not produced this year.)
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