Applications and Problem Solving

Practice What You Know: Make Some Noise

PRACTICE WHAT YOU KNOW

The Opportunity Cost of Attending College

QUESTION: What is the opportunity cost of attending college?

ANSWER: When people think about the cost of attending college, they usually think of tuition, room and board, course materials, and travel-related expenses. While those expenses are indeed a part of going to college, they are not its full cost. The opportunity cost is the next-best alternative that is sacrificed. This opportunity cost—or what you potentially could have done if you were not in college—includes the lost income you could have earned working a full-time job. If you consider the cost of attending college plus the forgone income lost while in college, you can see that college is a very expensive proposition. Setting aside the question of how much more you might have to pay for room and board at college rather than elsewhere, consider the cost of tuition, which can be $40,000 or more at many of the nation's most expensive colleges. Add that out-of-pocket expense to the forgone income from a full-time job that might pay $40,000 a year, and your four years in college can easily cost over a quarter of a million dollars.

Spending thousands on college expenses? You could be working instead!

CHALLENGE QUESTION: Ellen DeGeneres honed her trademark comedy routines in small venues until she became famous. But for every Ellen, there are thousands of other comedians who never made it big. What advice would you give to someone wrestling with the decision to leave college?

ANSWER: The question is tricky. We can't know the future, and staying in college and leaving college both have opportunity costs. By staying, you forgo the opportunity to try new things and, perhaps, discover in the process something else you excel at. However, leaving means a college degree will not be part of your resume. Making decisions when there is uncertainty about how the future will unfold is what makes choices difficult, because there are opportunity costs in both directions.

Practice What You Know

If you go to see Drake, what is your opportunity cost?

A. $0 

B. $51 

C. $99 

D. $150 

How many workers should a profit-maximizing firm hire if the price is $5 and the wage is $75?

A. 1 

B. 2 

C. 3 

D. 4 

# of workers	# of goods produced
0	0
1	30
2	55
3	75
4	90
5	100

Practice What You Know: Shift v. Slide

PRACTICE WHAT YOU KNOW

Shift of the Curve or Movement along the Curve?

Cheap pizza or…

…cheap drinks?

QUESTION: Suppose that a local pizza place likes to run a late-night special. The owners have contacted you for some advice. One of the owners tells you, "We want to increase the demand for our pizza." He proposes two marketing ideas to accomplish this goal:

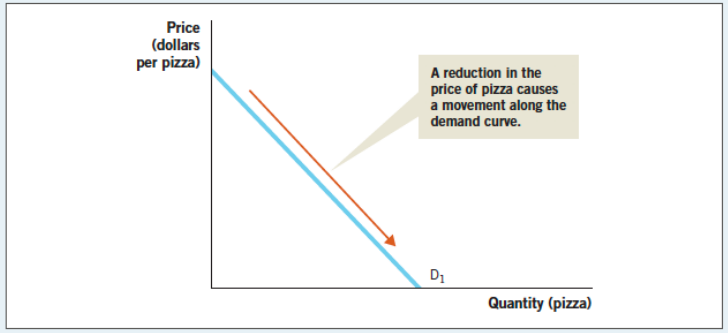
1. Reduce the price of large pizzas.
2. Reduce the price of a complementary good—for example, offer two half-priced bottles or cans of soda with every large pizza ordered.

Which strategy will you recommend?

ANSWER: First, consider why late-night specials exist in the first place. Because most people prefer to eat dinner early in the evening, the pizzeria has to encourage late-night patrons to buy pizzas by stimulating demand. "Specials" are used during periods of low demand, when regular prices would leave the establishment largely empty.

Next, look at what the question asks. The owners want to know which option would "increase demand" more. The question is very specific; the owners are looking for something that will increase (or shift) demand.

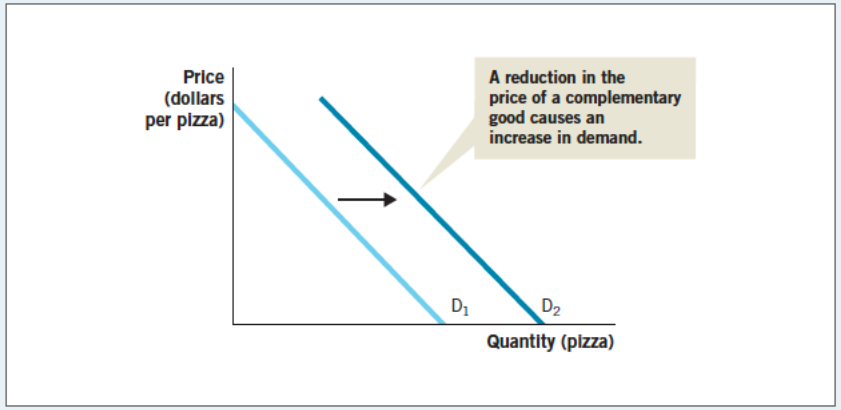
Consider the first option, a reduction in the price of pizzas. Let's look at this option graphically (see next graph). A reduction in the price of a large pizza causes a movement along the demand curve, or a change in the quantity demanded.



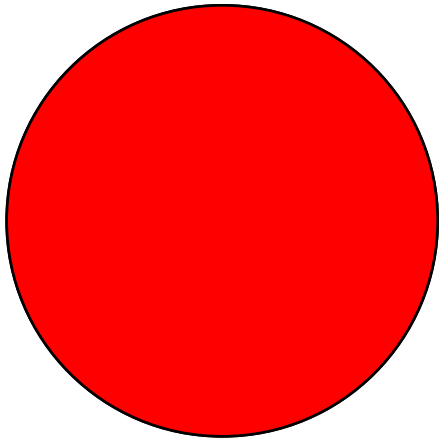
Now consider the second option, a reduction in the price of a complementary good. Let's look at this option graphically (next graph). A reduction in the price of a complementary good (for example, soda) causes the entire demand curve to shift. This is the correct answer, because the question asks which marketing idea would increase (or shift) demand more.

Recall that a reduction in the price of a complementary good shifts the demand curve to the right. The other answer, cutting the price of pizzas, causes a movement along the existing demand curve, which does not increase demand.

If you move along a curve instead of shifting it, you will analyze the problem incorrectly.



Think-Pair-Share



2 minutes

You work at a restaurant that serves drinks.

- Your boss comes to you, knowing you are studying economics, and asks for your opinion on the following question:

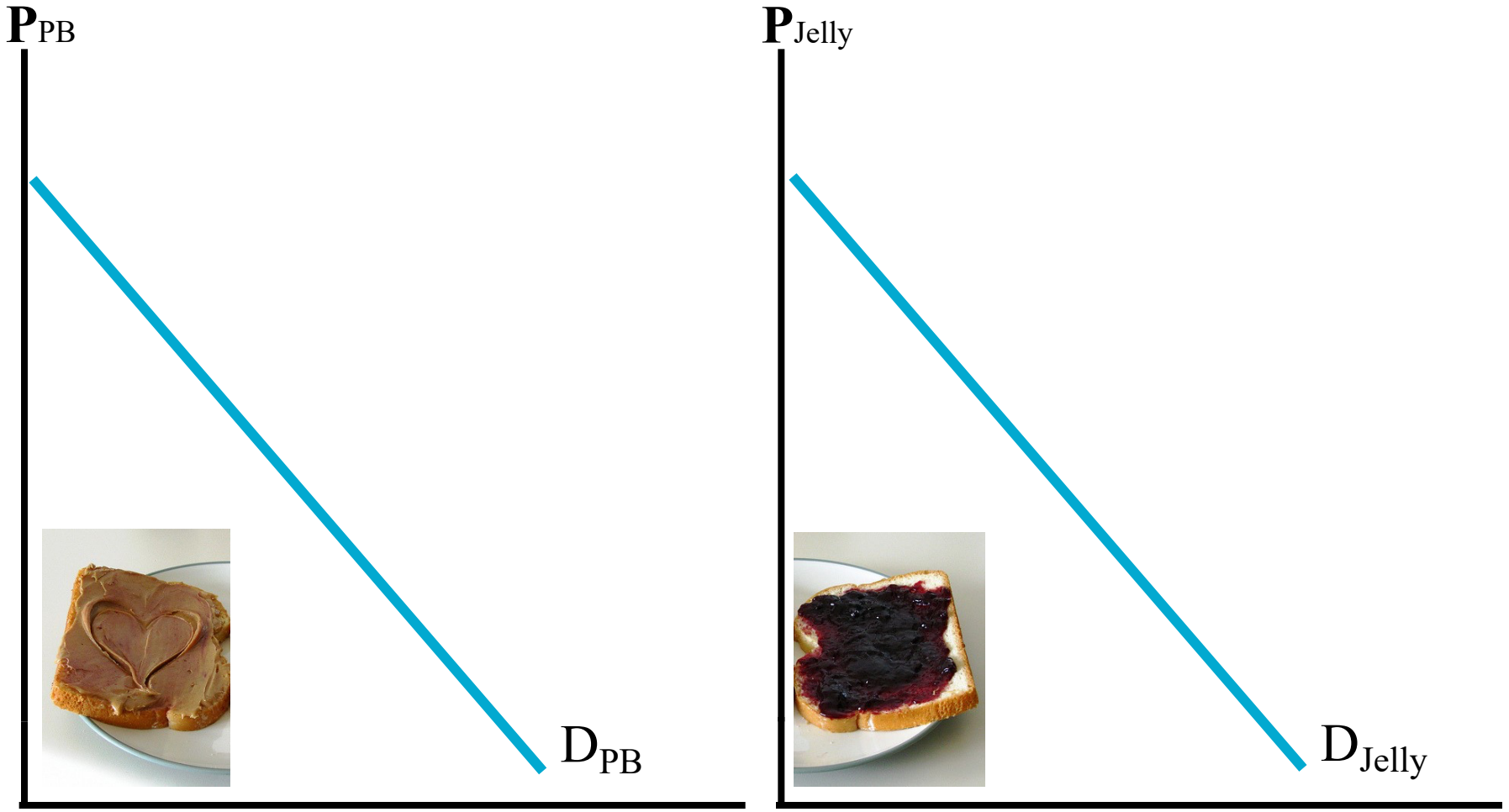
Which of the following would *change the demand* for drinks the most?

A. a reduction in the price of a complementary good.
B. a reduction in the price of drinks.
C. both A and B would increase the demand for drinks.

Think-Pair-Share:

Is this meme correct?

“Let’s Fall in Price and Increase Our Demand for Each Other”



Peanut Butter Market

Jelly Market

Practice What You Know: Minimum Wage

Think-Pair-Share

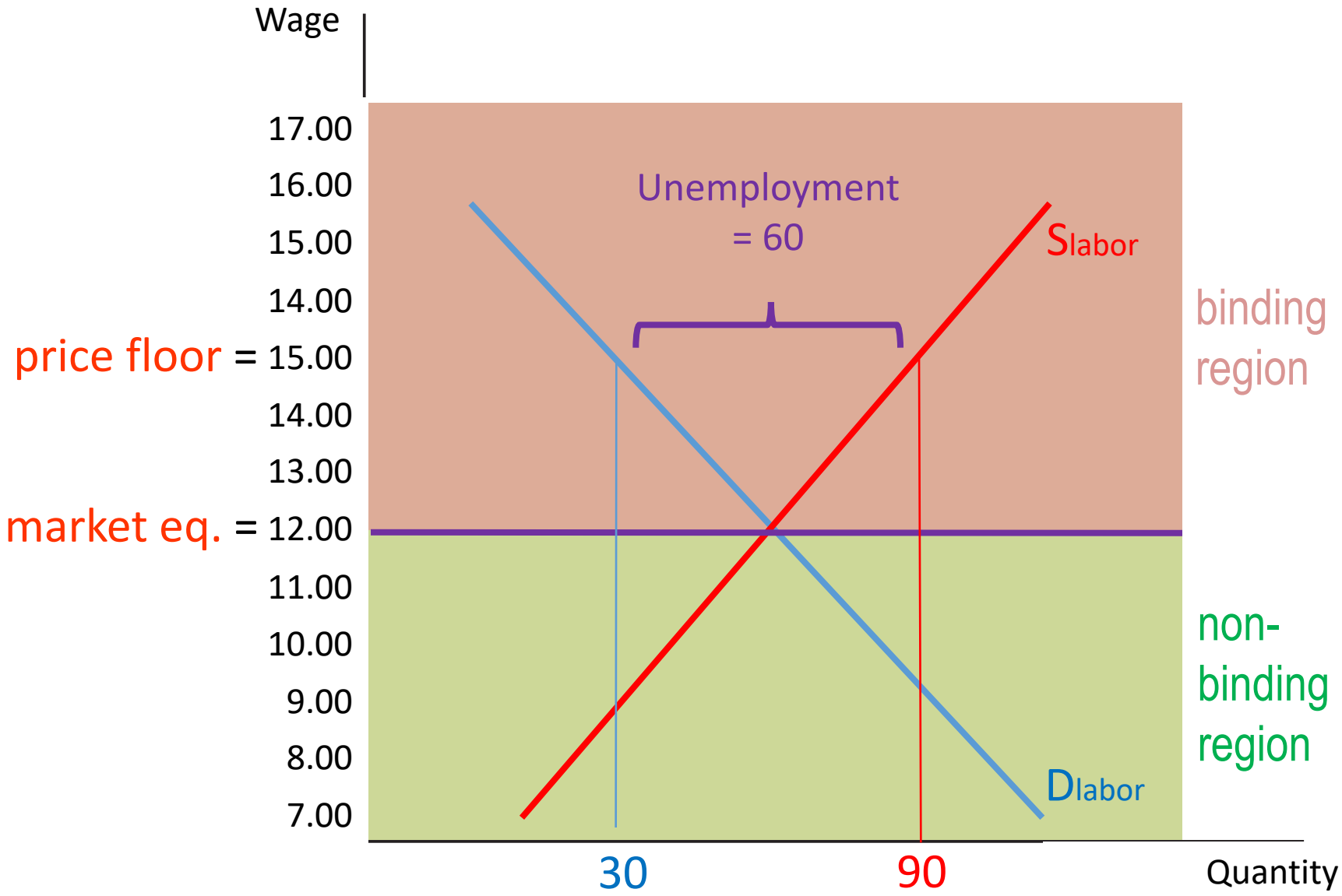
You are looking for a low skill job in Tucson. The state minimum wage is $11/hour, the federal minimum wage is $7.25/hour & the market equilibrium wage is $12/hour.

A) What wage will you be paid?

B) Are the state & national wages binding or non-binding price floors?

C) Now suppose AZ increases the minimum wage from $11/hour to $15/hour, which is above the equilibrium market wage. At $15/hour, labor demand is 30; labor supply is 90. Using a diagram, show how this might affect the number of workers employed & indicate any unemployment.

Think-Pair-Share Answer C



Practice What You Know: Cost Calculation Puzzles

Think-Pair-Share

Fill in the blanks! Complete the grid in 5 minutes or less.

(Teams of 3 or more)

Formulas: TC = TFC + TVC, AFC = TFC/Q, AVC = TVC/Q, ATC = TC/Q, MC = change in TC

Quantity	Total fixed cost	Total variable cost	Total cost	Average fixed cost	Average variable cost	Average total cost	Marginal cost
1	_____	$200	_____	_____	_____	$400	
2	$200	_____	$480	_____	_____	_____	_____
3	_____	_____	$530	_____	_____	_____	_____
4	_____	_____	_____	_____	$90	_____	$30
5	_____	_____	$650	$40	$90	_____	_____
6	_____	$600	_____	_____	_____	_____	_____

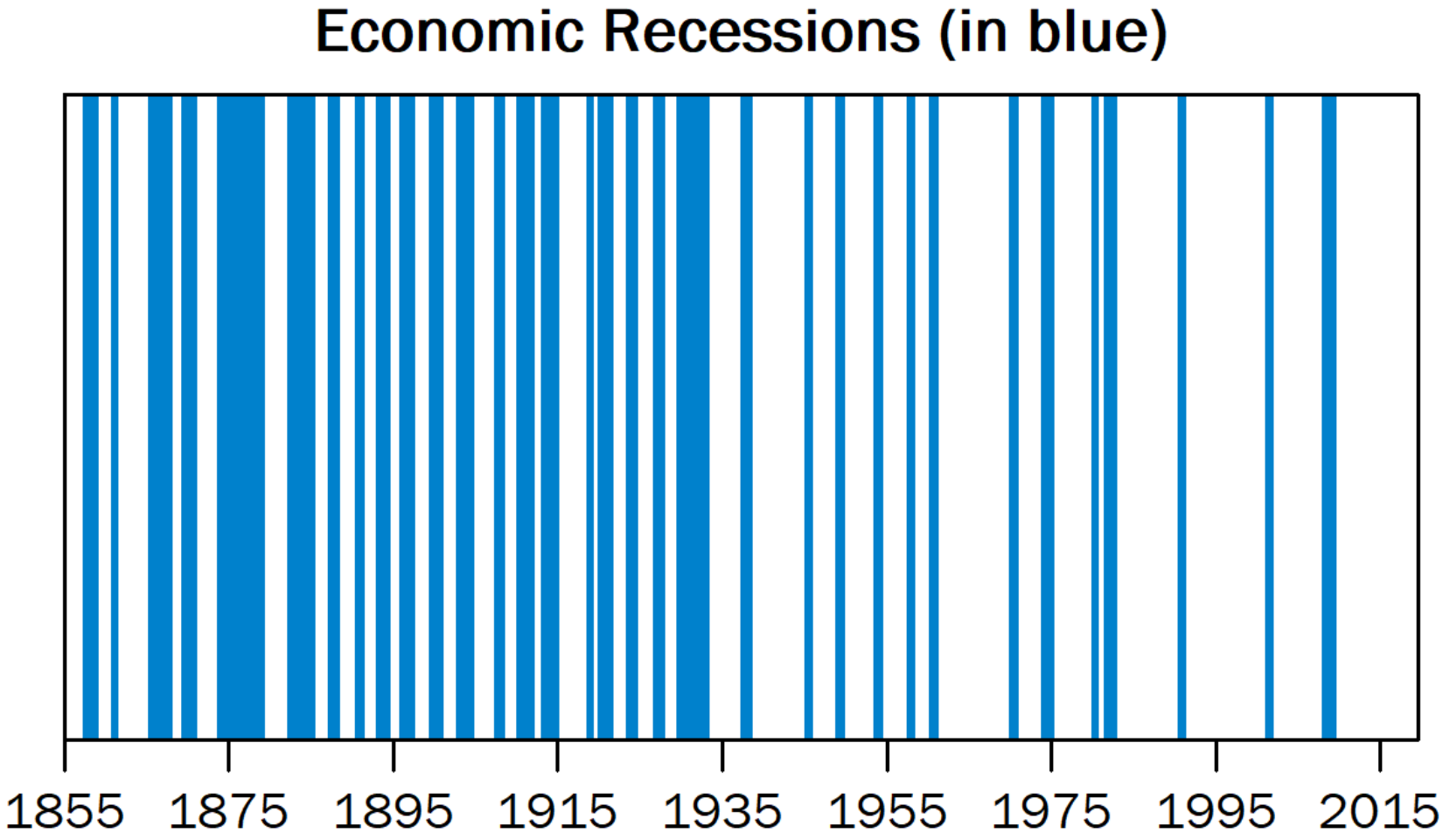
Jelly Bean Production	
Cases	Average Total Cost
98	$150
99	$151
100	$152
101	$153

TPS: Would you accept $200 to make the 101st case?

Practice What You Know: Eliminating Recessions

TPS: Interpret the Bar Code

(Write a short paragraph that describes what has happened to the duration and likelihood of a recession over time. Speculate why?)



Practice What You Know: Growth

GDP growth in Wakanda

- **OBJECTIVE**
- Determine the growth rate of Wakanda over time. What leads to the significant change in GDP in this small, land locked country?

- **GOAL**
- Compute the growth rate of GDP in Wakanda and explain why this country experienced such tremendous rates of growth.

- **PROCESS**
- Show the class the GDP data for the years 950 and 1000 and ask them to compute the GDP growth. Discuss why the growth rate was so slow.

- Now, show them the data from 1960. Compute the growth rate from the year 1960 to 2010 and discuss why this rate is so high.

- Show the two Black Panther videos as part of this activity. This will give students some perspective on what has occurred in Wakanda.

- Increases from $1,000,000
- to $1,010,000
- What is the growth rate?

Wakandan GDP between 950 and 1000

Wakandan growth from 1960 to 2010

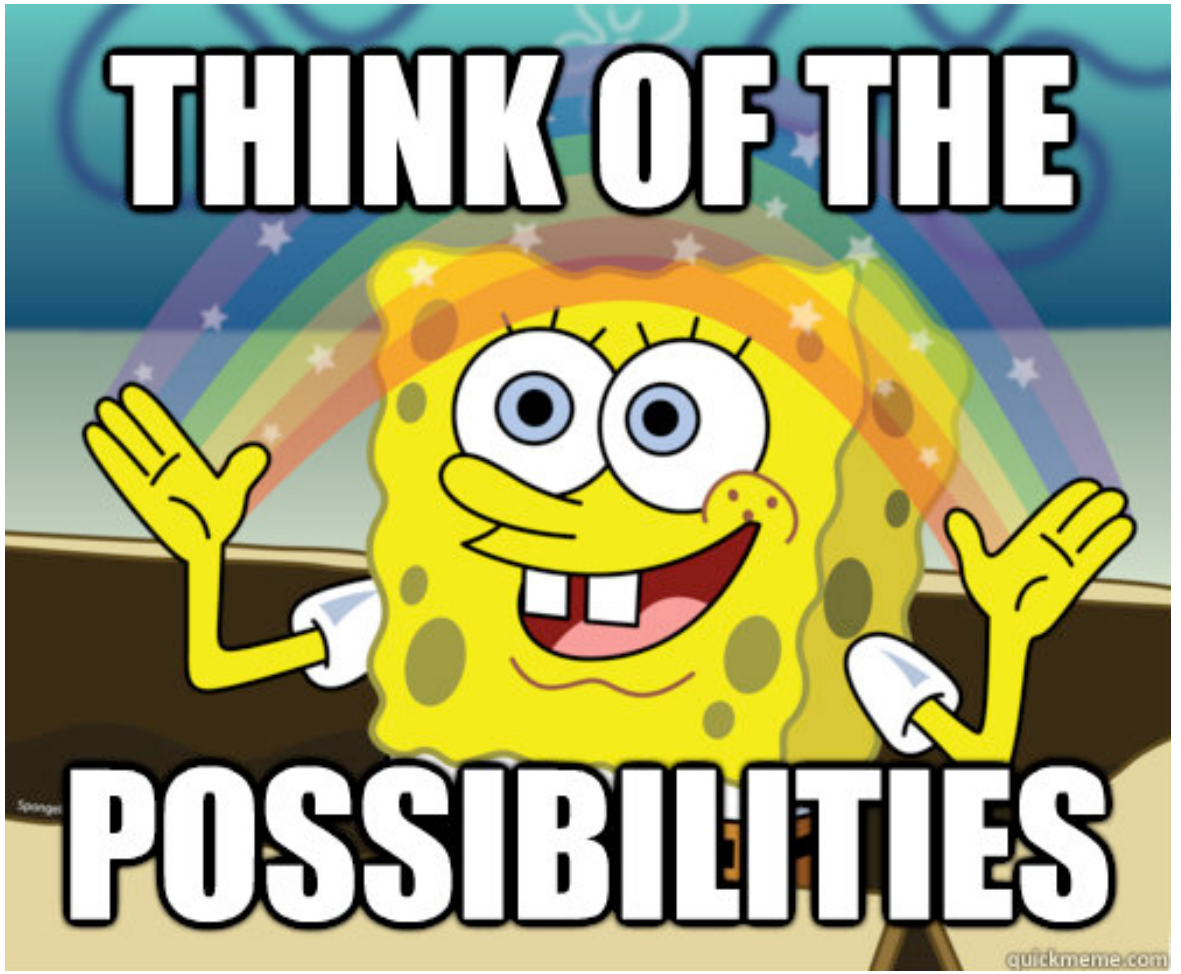
- Increases from
- $682,625,500 to
- $31,632,697,500.
- What is the rate of growth?
- Why is it so much higher?

TPS: Which two countries are these?


Kahoot!

Practice What You Know: Production Possibilities

Production Possibilities Participation Quiz



Go to the Kahoot app or at Kahoot.it.

Think-Pair-Share

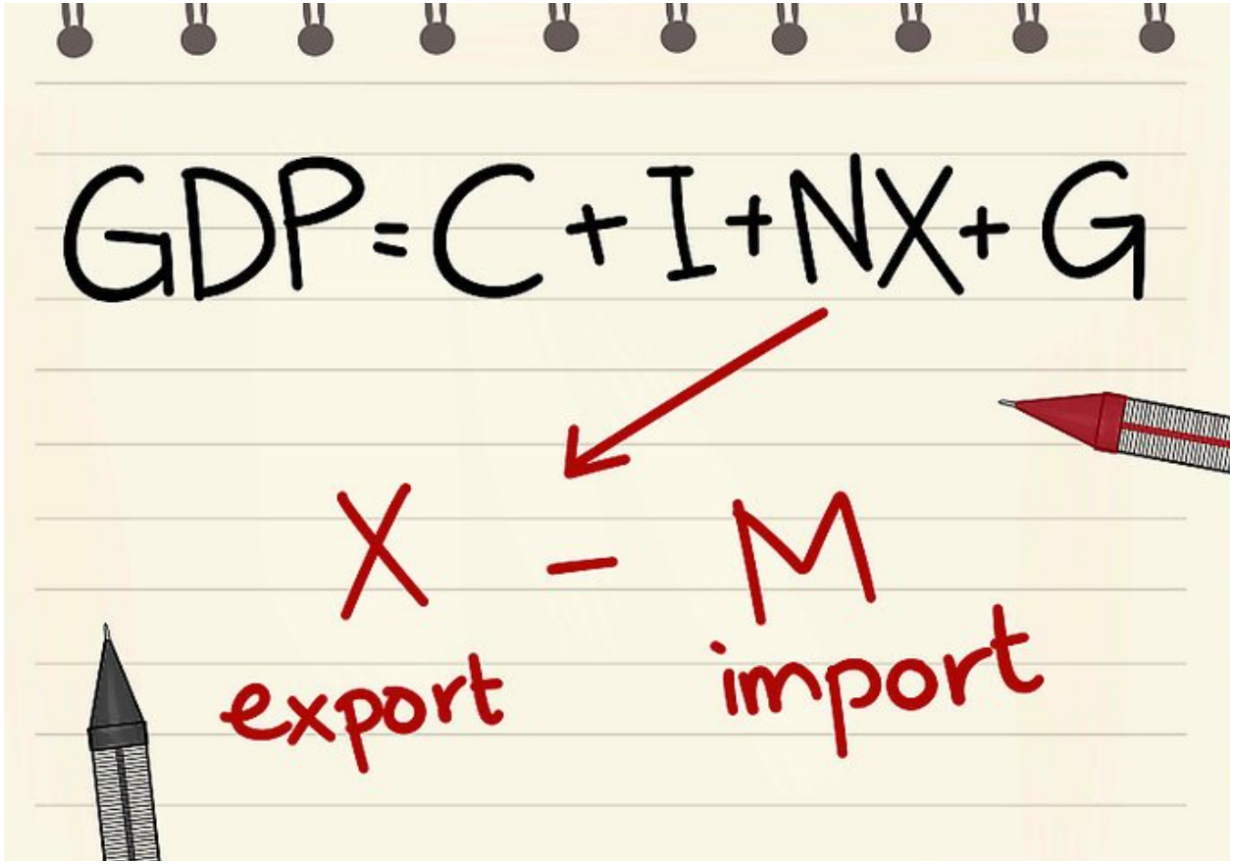
Is it in GDP or not?

Categorize the following eight items as either included in the calculation of U.S. GDP or excluded from it.

Kahoot!

COUNTING GDP like an economist

- Using the details provided to you, work with your classmates to calculate GDP.



Practice What You Know: Comparative Advantage

https://create.kahoot.it/creator/3e0d86a2-034c-4b3e-b033-e75c1e725853

Bat Man and Robin – the dynamic duo

Practice What You Know: Saving for the Future

Saving like a superhero

https://create.kahoot.it/details/save-like-a-superhero/cb9bc996-7104-4bd2-9f50-1ac05607cecd