



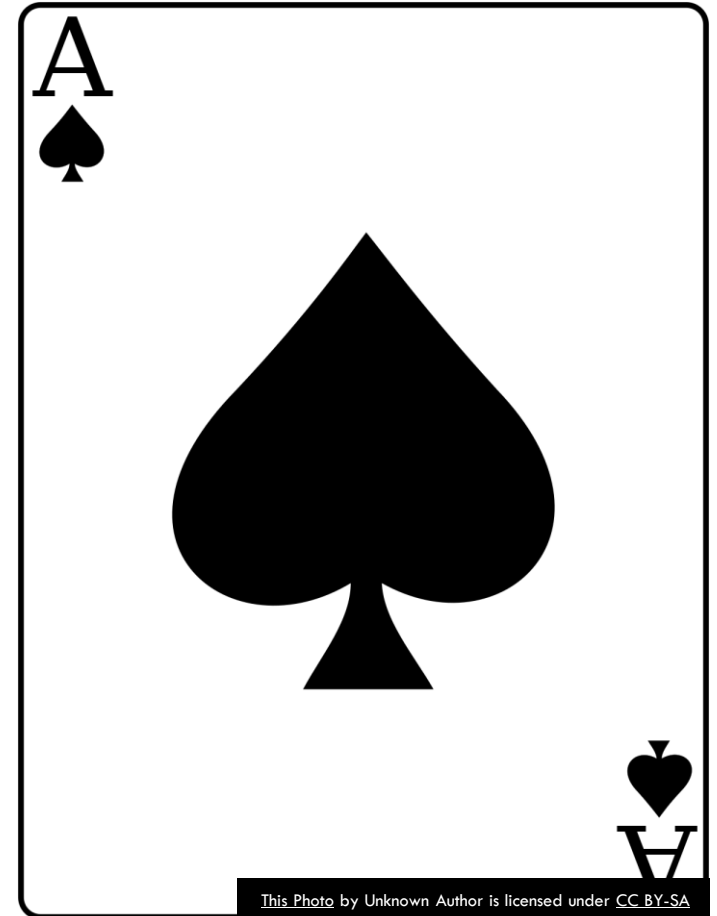
How to ACE Your ADAS

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What is an ACE?

- Applied Concept Exercise (ACE)
- Origins in science education (1987)
- Support from cognitive science (how people learn)
- An ACE provides sequence and organization of programs, units, and lessons



An ACE

- A set of exercises that follow the 5E instructional model (**Engage, Explore, Explain, Elaborate, Evaluate**)
- Engaging, challenging situation or story that connects content with real situation from lives of students
- Learning and applying econ knowledge, developing “soft skills” (critical thinking, creativity, communication, and collaboration), practicing metacognition

ACE vs Active Learning

ACEs improve

- process skills
- conceptual knowledge
- manipulative skills
- lower-order thinking skills
- higher-order thinking skills
- student interest
- overall achievement

compared to simple active learning (receive content and do activity)



My Evidence

- Decreased withdrawal rates
- Increased time engaging with material
- Improved exam performance



A Typical ACE



Ask a question that is related to the material that requires a decision or taking a stance (Socratic method)



Proceed to explore possible answers through multiple scaffolded activities (conducting research, listening to experts, solving exercises, think-pair-share)



Challenge student comprehension by applying to a different context

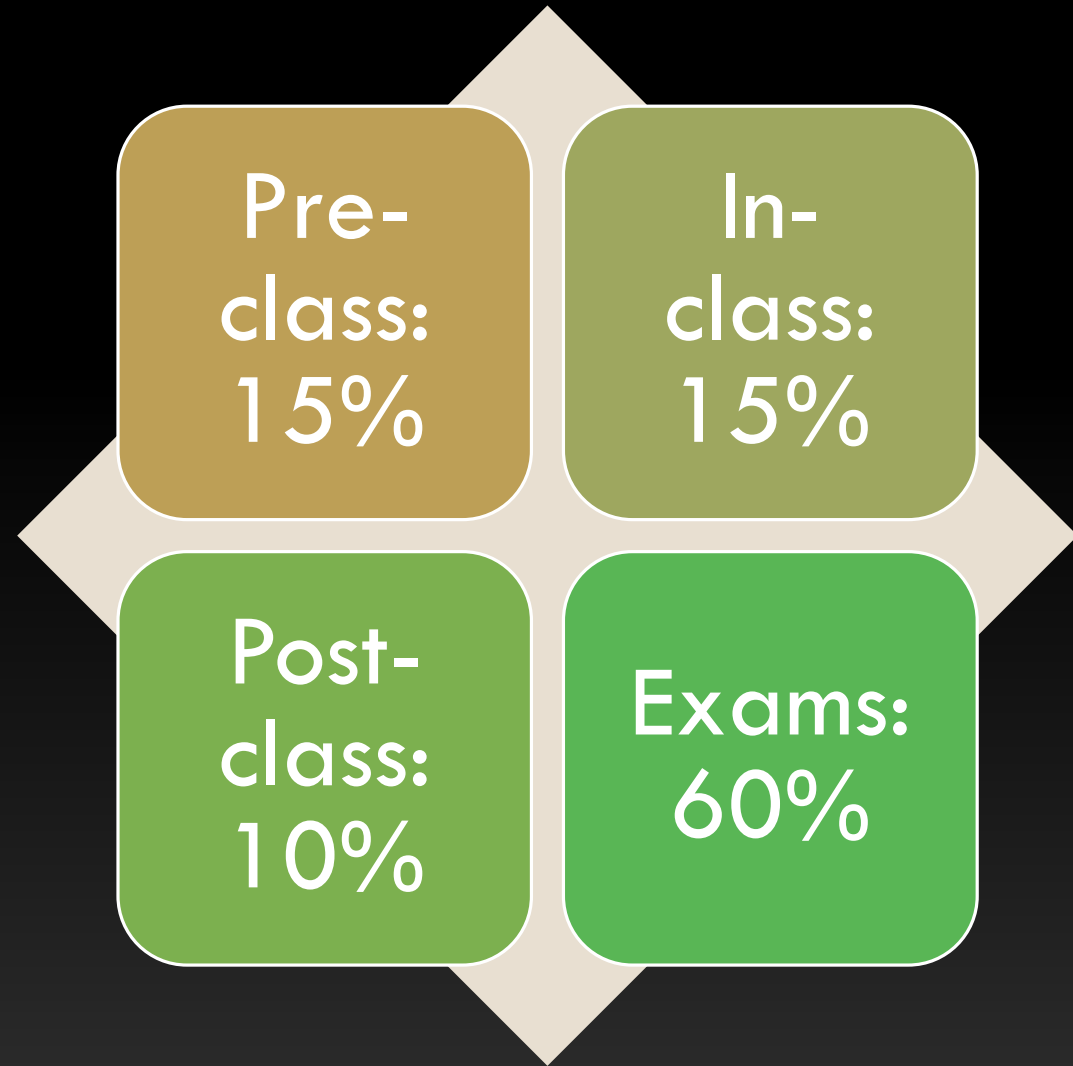


Review answers and revisit initial question

My Typical ACE Class

1. Conduct a quiz to review pre-class material
2. Review quiz
3. Work through an ACE
4. Encourage reflection (e.g. 1-minute paper)

Incentives Matter



Engage

- Mentally engage students with the event in question
- Make connections to existing knowledge



Explore

- Work together
- Participate in hands-on activities
- Investigate
- Practice skills
- Build models or collect data
- Test predictions



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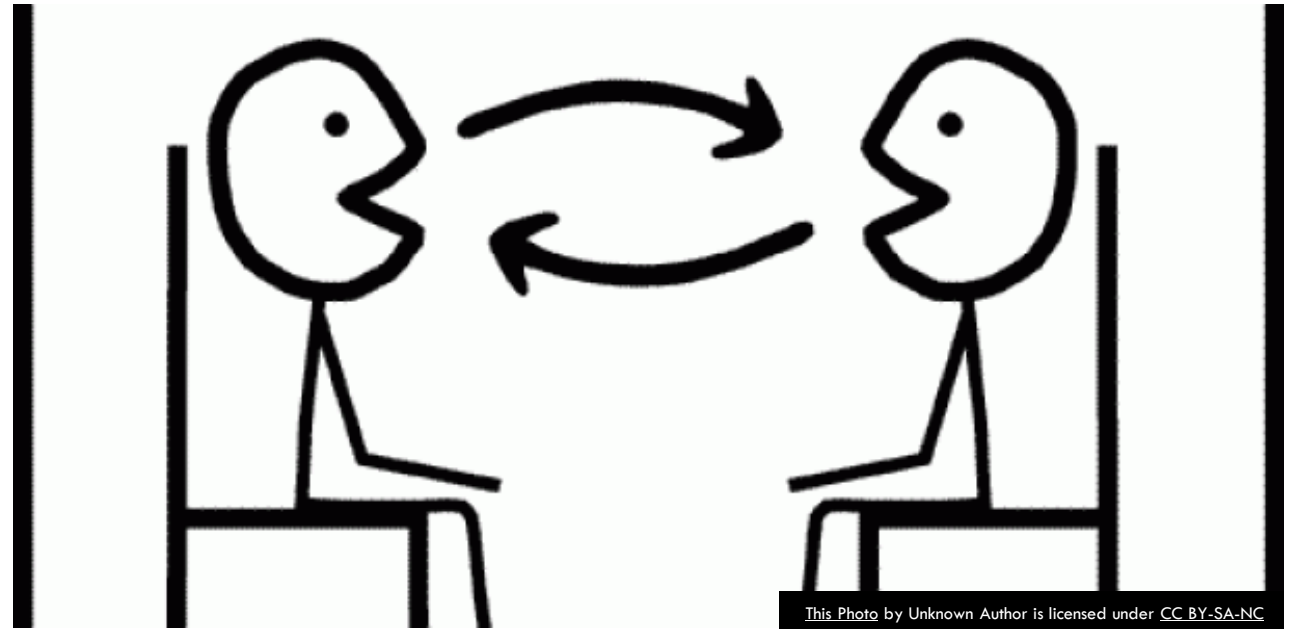


Explain

- Students explain their understanding of concepts
- Teacher provides feedback, defines terms and concepts, fine-tunes understanding
- Students make connections to previous activities

Elaborate

- Challenge students to
 - apply existing knowledge
 - investigate further
 - apply knowledge to new (but similar) situations
- Provide practice and reinforcement



Evaluate

- Students access their own knowledge, skills, abilities
 - Draw conclusions
 - Demonstrate understanding, knowledge, skills
- Teacher evaluates student progress



Sample Class: AD-AS (1h15min)

Engage: Song “Take this Job and Shove It”

- JOLTS and AS

Mini-Quiz followed by Review

Explore: Great Recession

- Which way did the economy move?

Explain:

- Investigate Great Recession in model detail

Elaborate:

- Investigate GDP and CPI data further at a different point in time

Evaluate:

- Work in groups: Find a recent news article about a current economic event and use the AD-AS diagram to illustrate the event – be prepared to present it in class

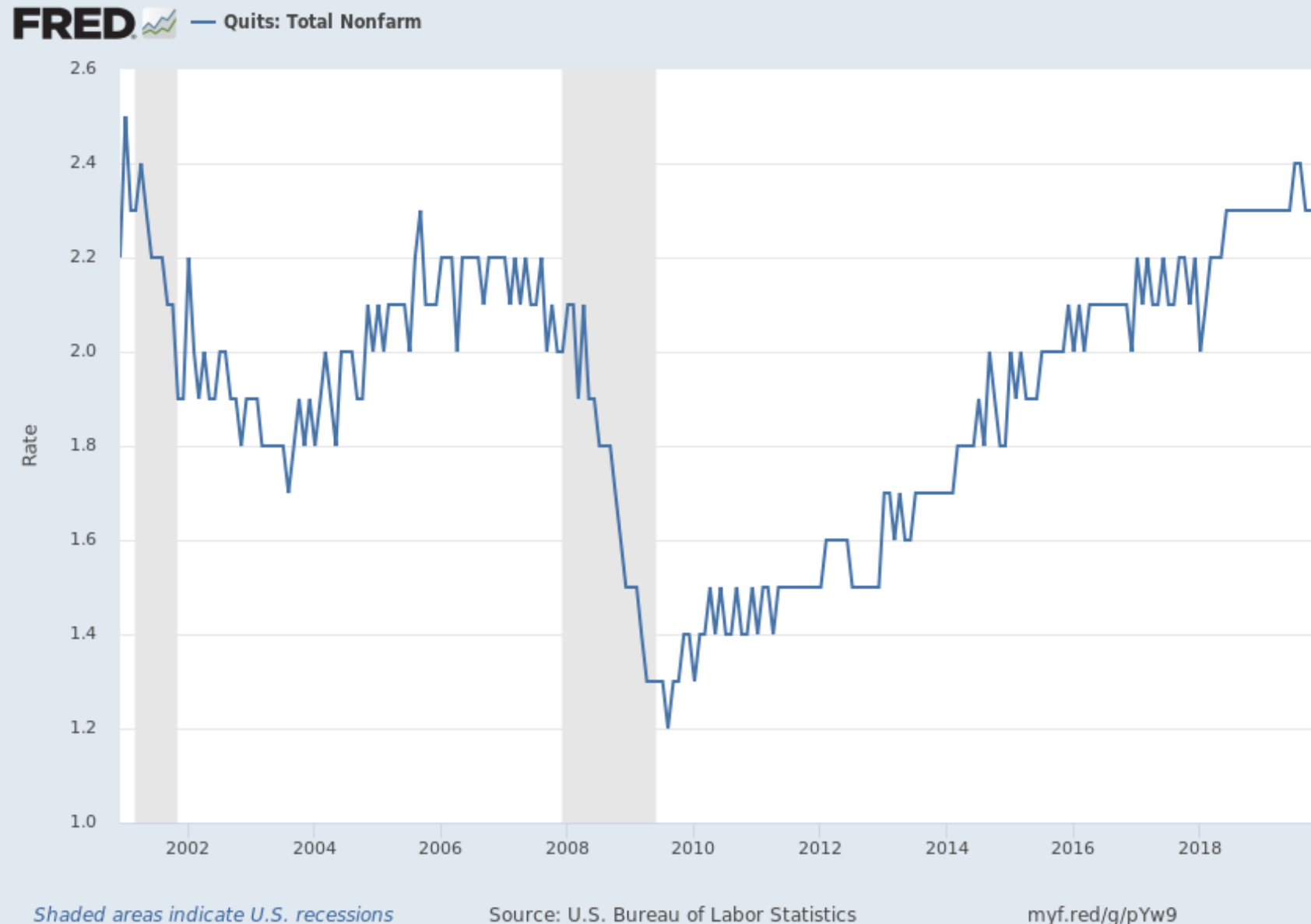
ECONMUSIC
(Engage)

If people are voluntarily quitting their jobs where are we likely on the AS curve, are we at equilibrium, to the right of the equilibrium, or to the left of the equilibrium?

Is it a good or bad sign for the economy when people are quitting their jobs?

Take this Job and Shove it

What stage is the economy in
when people voluntarily quit
jobs?



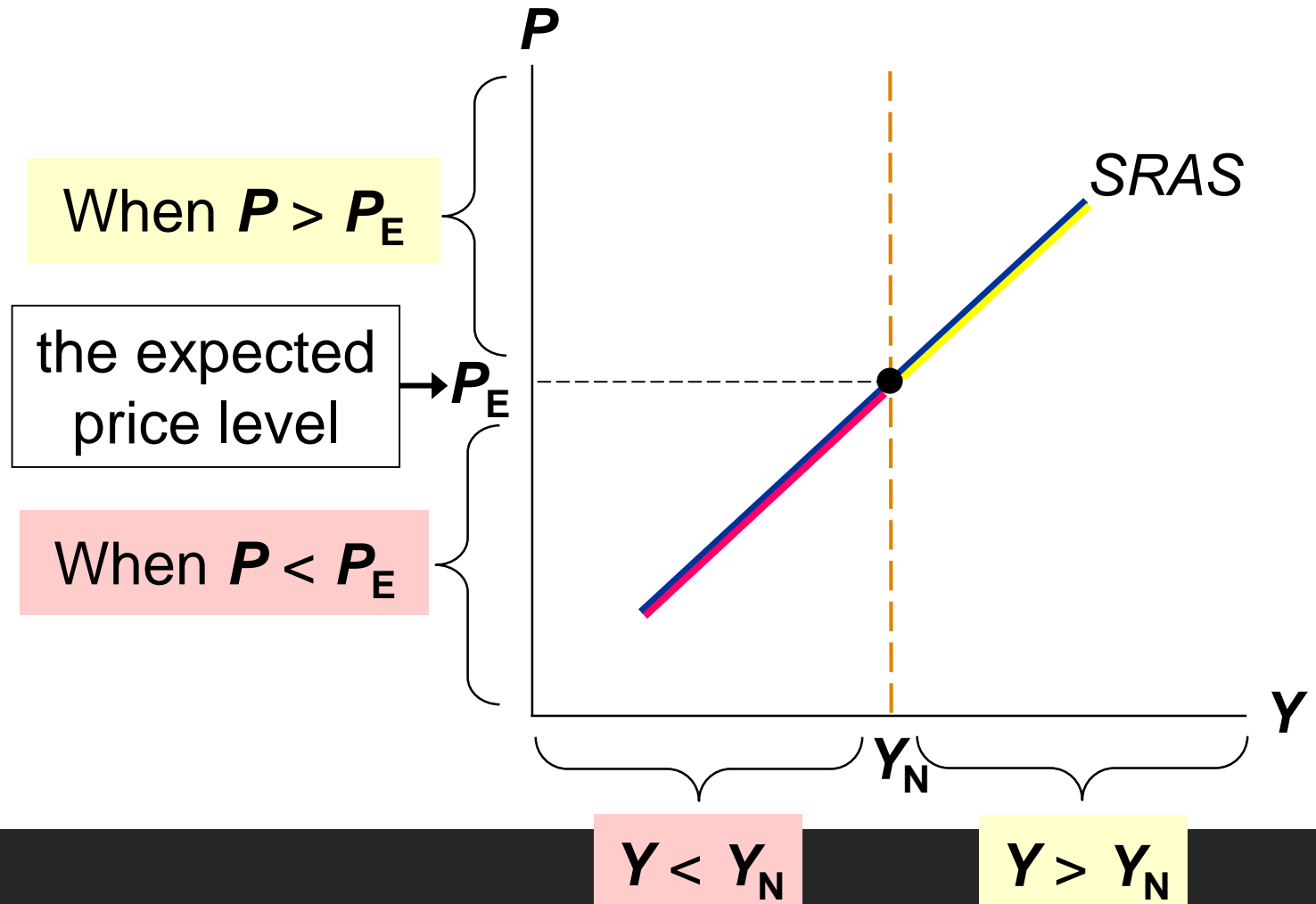
SRAS

$$Y = Y_N + a(P - P_E)$$

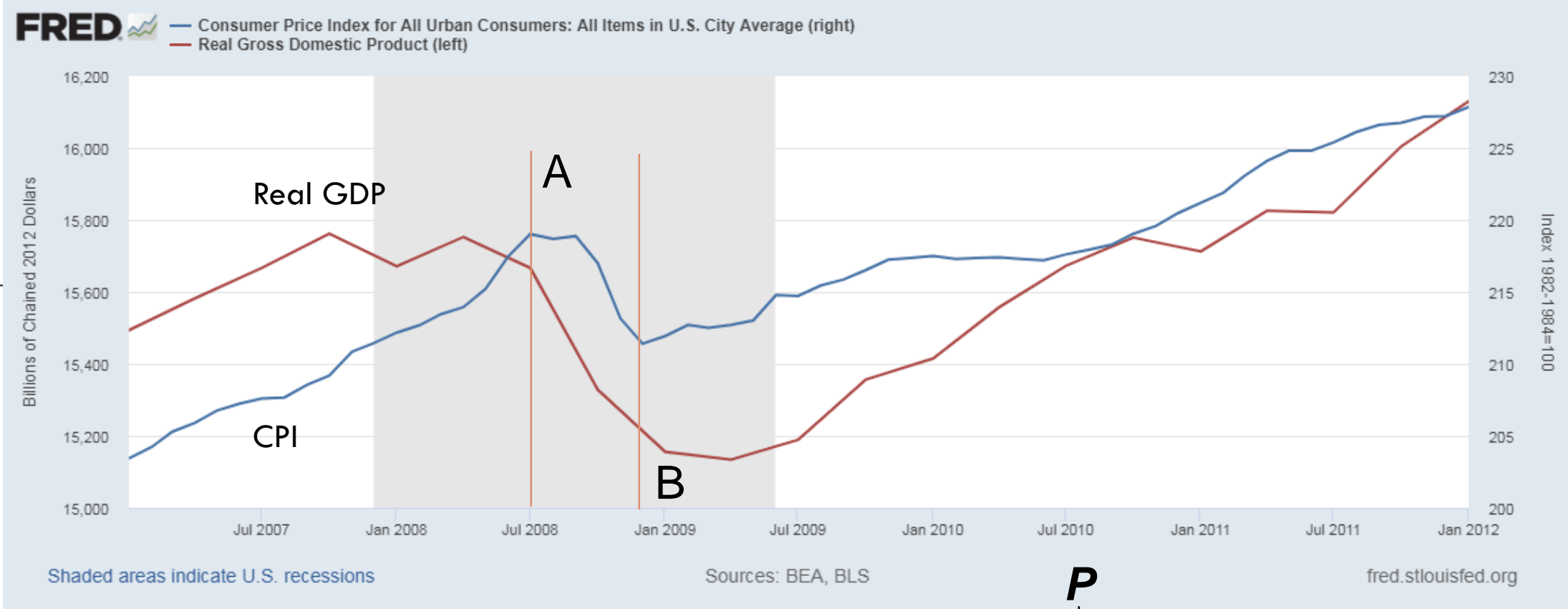
Workers are voluntarily quitting jobs

That means the real wage is lower than what they are expecting for their current work

So $P > P_E$ and $Y > Y_N$

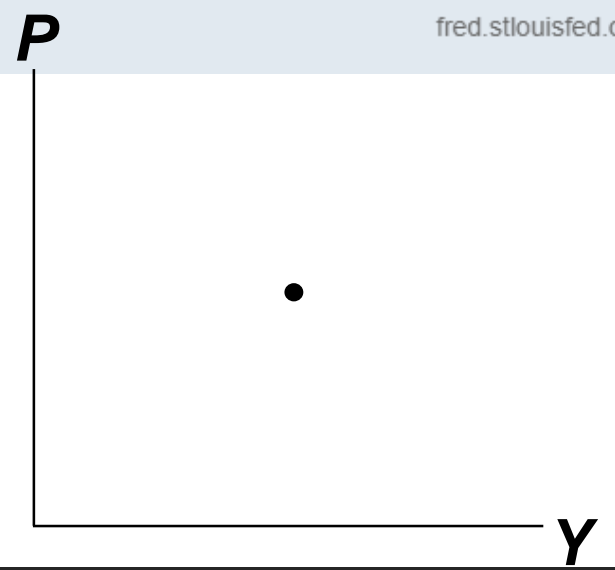


Data and ADAS (Explore)

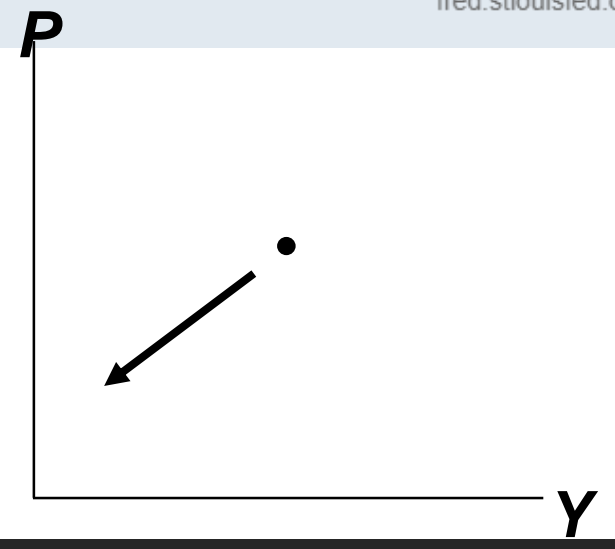
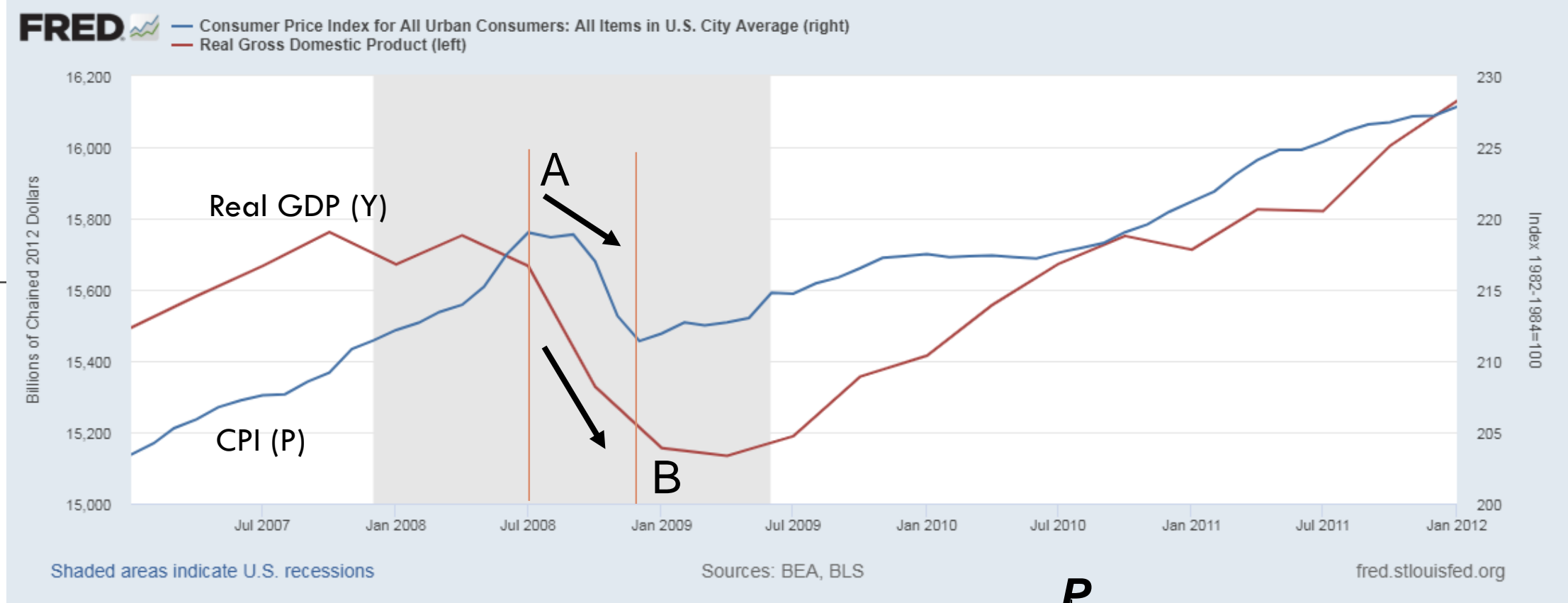


Given the data, which way did the economy move on the ADAS graph during the Great Recession between points A and B?

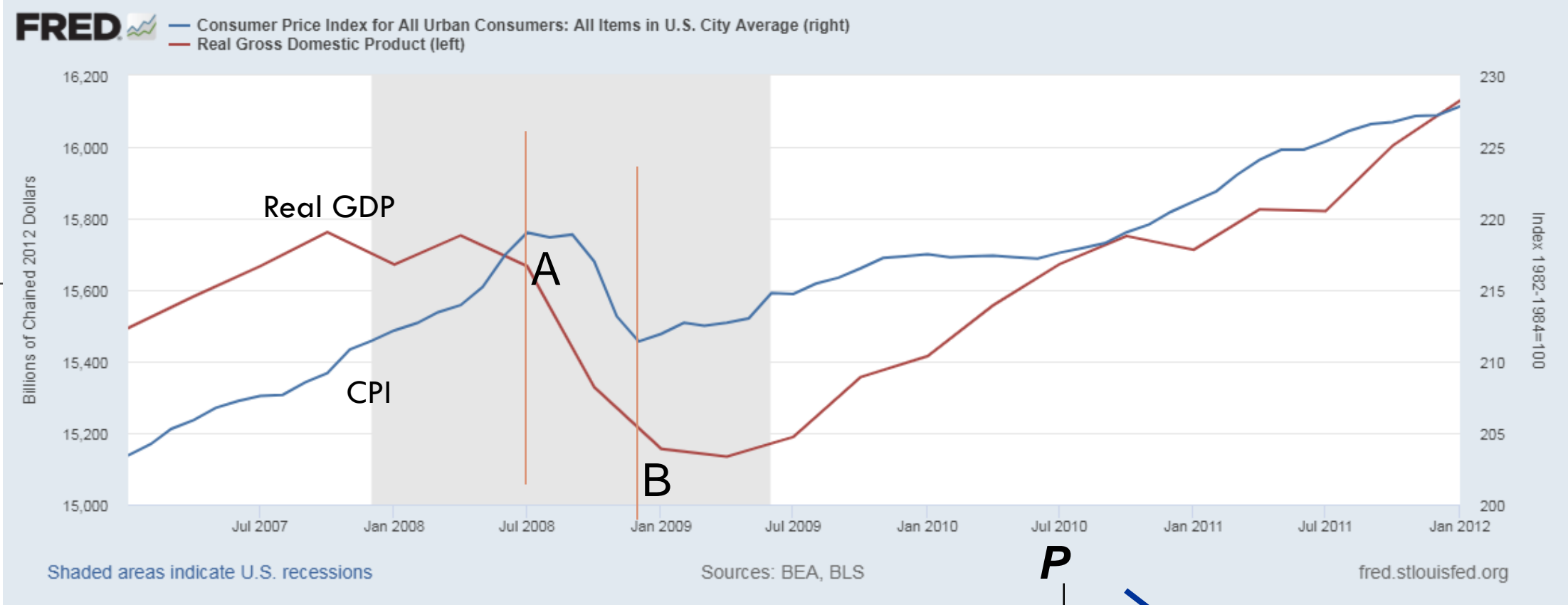
- A) up & right; B) up & left; C) down & right; D) down & left



Data and ADAS (Explore)



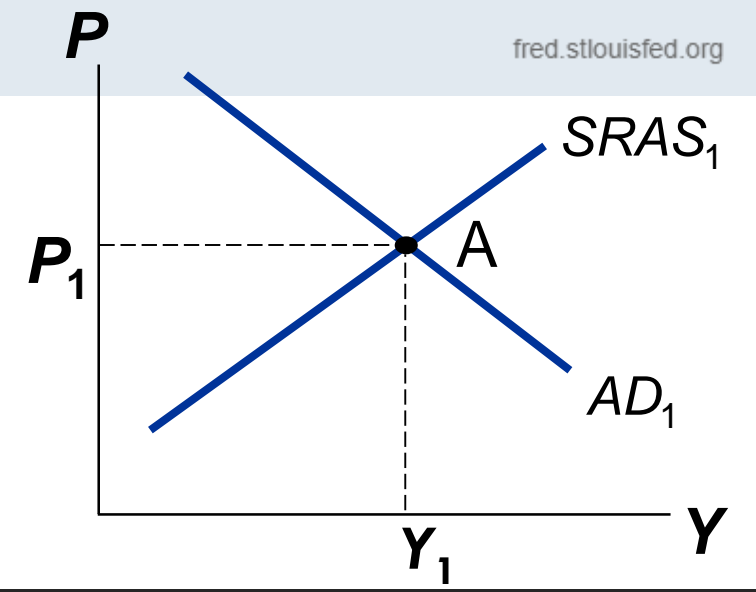
Data and ADAS more detail (Explain)



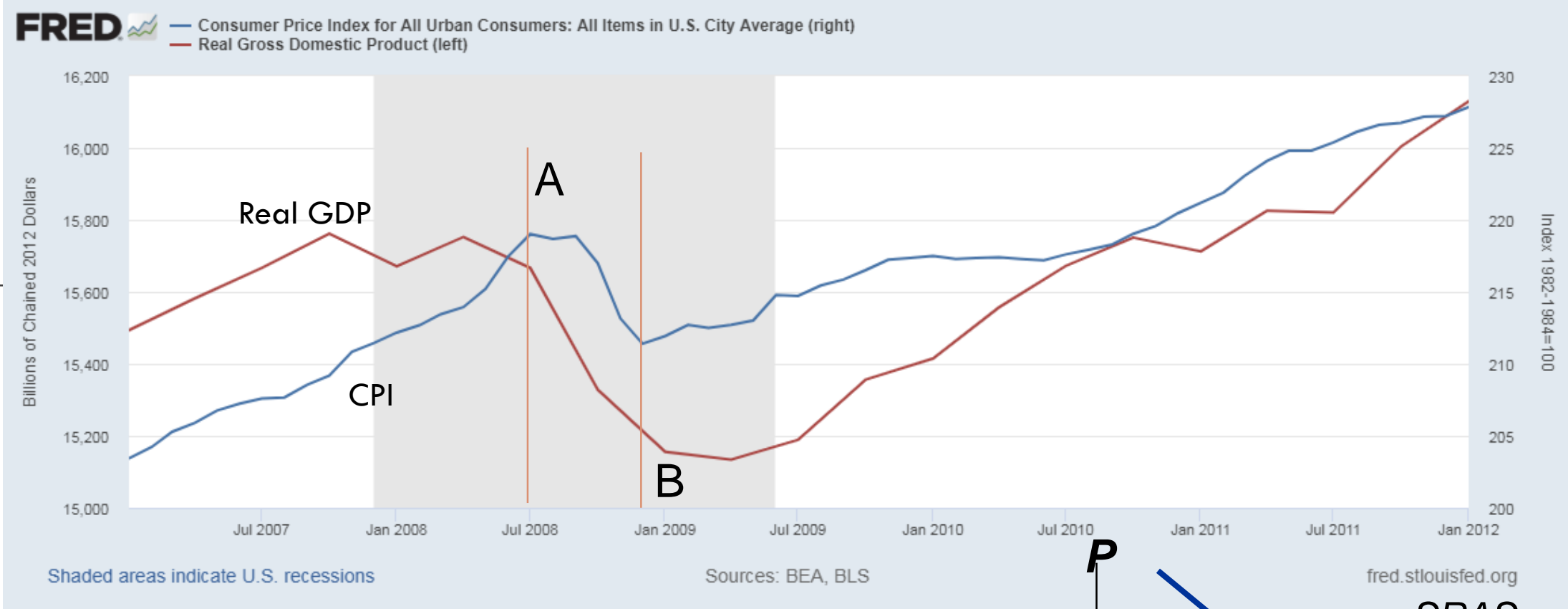
Given the data, which curve shifted and in which direction between points A and B?

Use the AD-AS diagram to model this recession.

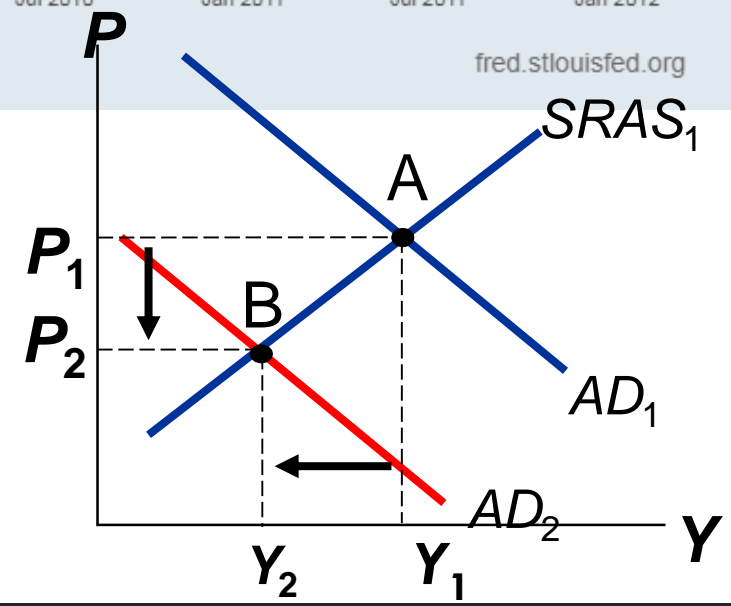
Be prepared to share your answer with the class (group)



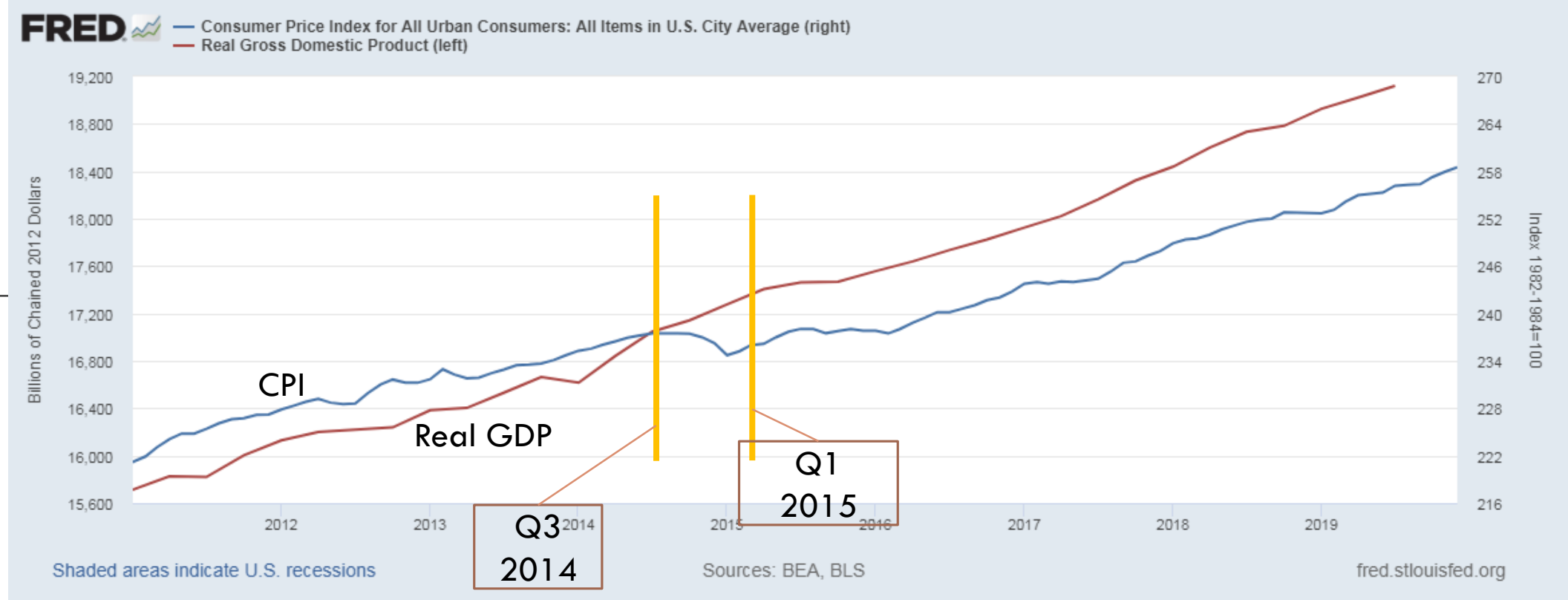
Data and ADAS more detail (Explain)



Between A and B:
CPI is declining & Real GDP declining
Likely a shift of the AD curve



Data and ADAS new situation (Elaborate)



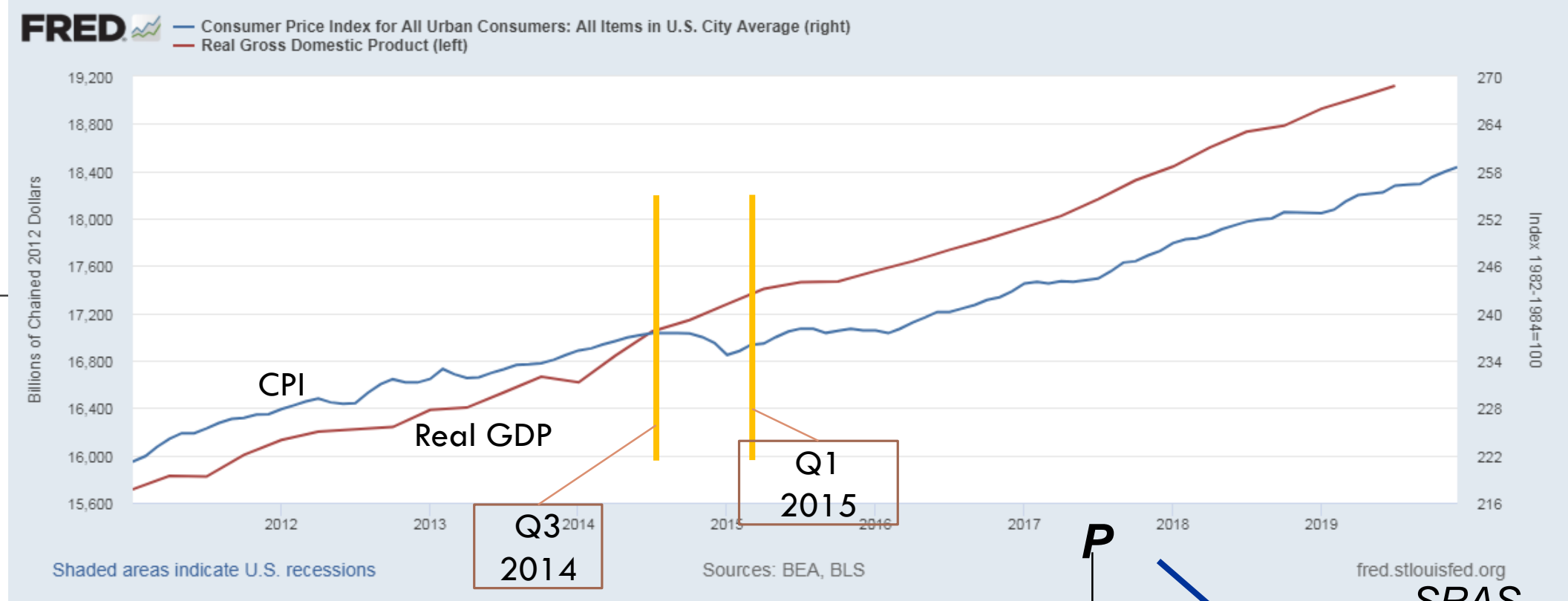
Analyze the data from Q3 2014 to Q1 2015

Notice that real GDP increased, while the CPI decreased

What could be the reason for this?

Which curves shifted and why?

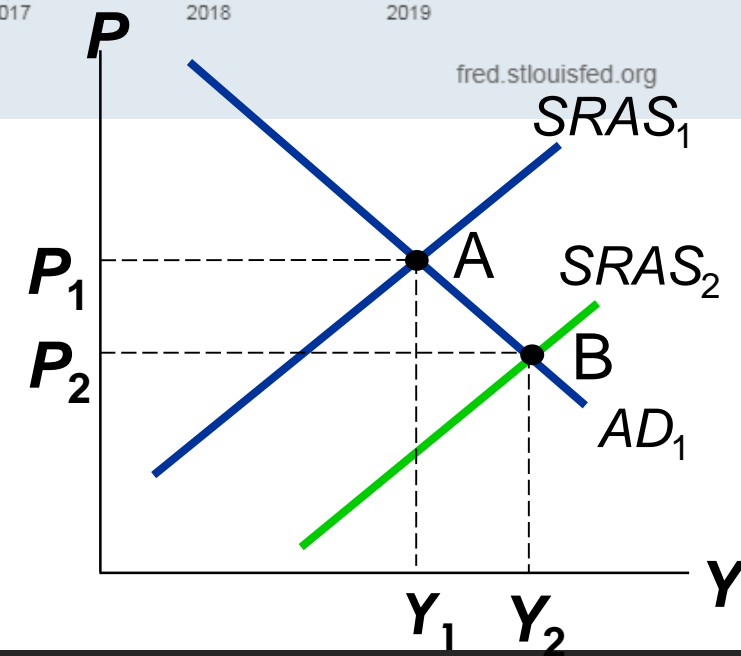
Data and ADAS new situation (Elaborate)



Analyze the data from Q3 2014 to Q1 2015

The drop in the CPI in Q3 14 was likely caused by drop in the world oil prices

Oil prices dropped shifts the SRAS to the right, lowering P and increasing GDP



Build your own model (Evaluate)

Step 1: Go online

Step 2: Find a recent news article about a current real-world event.

Step 3: Use the AD-AS model to illustrate the event

Step 4: Work in groups (Think-Pair-Share)

Step 5: Draw the basic AD-AS model, illustrate all the possible shifts

Step 6: Write 1-2 sentences explaining why you think the event had the effect that you illustrated on the diagram

Step 7: Finally, open Moblab and answer the following question:

- What will happen to equilibrium price and GDP?
- Write a brief explanation of the event and the changes in the model and enter in the URL of the article you found

Reflection

Please share one specific example (not mentioned in class) of how today's topic relates to your life.

Briefly explain your rationale (no more than 2-3 sentences).

Any

Questions

Questions or Comments?