

Lesson Plan

How Far Would Your Money Go in Another State?

Working With Price Differences

Overview

Price differences from one part of the United States to another can have a big impact on students' college and career plans. Don't let that come as a surprise! Students will develop their math and reasoning skills while learning why they need to keep living expenses in mind when planning their futures.

Learning Objectives

At the end of this lesson, students should be able to:

- Understand that price levels vary across the United States and this affects residents' purchasing power
- Calculate price differences from place to place using regional price parities
- Adjust a nominal salary figure to reflect a state's price levels
- Compare salary offers from jobs in different places based on differing price levels

Resources

- For each student, a copy of the Activity **How Far Would Your Money Go in Another State?** It's also available to read online at [bea.gov/classroom](https://apps.bea.gov/itable/).
- Students can find the regional price parities for states (and metropolitan areas, too) in the Regional Data tables at <https://apps.bea.gov/itable/>, or by going to www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area, then clicking Current Release and scrolling past the maps to the chart. **For easiest access, use the links at bea.gov/activities.**

Process

Give each student a copy of the introductory section and activities. Ask students to read the introductory text:

How Far Would Your Money Go in Another State?

Working With Price Differences

Do you ever wonder about living in a different state? You might move with your family, to go to college in another state, or for your career. In many cases, you'd notice that living in a new place is more expensive or less expensive than where you are now.

What if you were job-hunting and received offers in two different states for about the same pay? How could you make a more informed decision about which job to take? It would be a good idea to check out living costs in both areas. Would your paycheck buy more goods and services, including rent, in one place than the other?

You can compare price levels between two places by using **regional price parities**, or RPPs, produced by the U.S. Bureau of Economic Analysis. An area's RPP for all items compares its price level for all goods and services to the national average, which is set at 100.

Prices can vary greatly even within the same state. BEA produces RPPs for all 50 states and the District of Columbia, for metropolitan statistical areas, and for the nonmetropolitan portion of each state. They are published along with real personal income data in the Regional Data section of BEA's Interactive Data at <https://apps.bea.gov/itable/>.

You can also see the latest state RPPs within the real personal income release found at <https://www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area>.

For direct links to the RPP data or the news release page, go to [bea.gov/activities](https://www.bea.gov/activities).

You may want to lead a class discussion around these questions:

- Is there another state you might want to live in one day? Why?
- Do you think living expenses there are more or less than where you live now?
- Will comparing statewide price differences from one state to another tell the whole story?
What about the prices you might find in big cities vs. rural areas, even within the same state?
- Do you think it's usually more expensive to live in a big city or a small town?

Ask students to read the section titled *Using Regional Price Parities to Compare Price Levels* and answer the questions that follow.

Using Regional Price Parities to Compare Price Levels

To compare the price levels of two states, you can use RPPs in this formula:

(State A's RPP / State B's RPP) x 100

1) Find the states' all items RPPs in BEA's [Regional Interactive Data](https://www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area) or go to the most recent release (<https://www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area>), click Current Release, and scroll down to the chart. Use this example:

State A's RPP is **103.2**.

State B's RPP is **88.9**.

2) Divide State A's (higher) RPP by State B's (lower) RPP. Multiply the answer by 100:

$$(103.2 / 88.9) * 100 = 116.1$$

Rounding to a whole number, State A's prices are 116 percent of State B's prices. Goods and services that cost \$100 in State B would cost you \$116 on average in State A.

In other words, State A's prices are 16 percent higher than State B's.

To use State A's price level as your starting point, divide State B's RPP by State A's RPP. Multiply the answer by 100:

$$(88.9 / 103.2) * 100 = 0.86$$

State B's prices are 86 percent of State A's prices. Goods and services that cost \$100 in State A would cost you \$86 on average in State B, or 14 percent less.

Activities

Activities Part A:

Some answers will be specific to your state; see online data to find those answers. Those tables are updated annually.

1. What is your state's all items RPP? _____

2. At what number is the U.S. RPP always set?

3. Is your state's price level higher or lower than the national average (or the same)?

Circle one: Higher Lower The same

4. If your state's RPP is higher or lower than the national average, fill in the correct blank:

My state's price level is _____ percent higher than U.S. level.

My state's price level is _____ percent lower than the U.S. level.

Activities Part B:

5. Showing your work, calculate the difference between the price levels of California and South Dakota to fill in the blank in the sentence below (round to a whole number when writing the percentage).

California is _____ percent more expensive than South Dakota.

Activities Part C:

Use the regional price parities chart to answer these questions:

6. Which state has the highest prices?

7. Why do you think prices might be higher there than in other states?

For example, for Hawaii students might mention the extra cost of transporting goods to an island or the high cost of real estate in a location that's in-demand for tourism and luxury housing.

8. Which state has the lowest prices?

9. How much higher are prices in the most expensive state, compared with the least expensive state? Calculate using their RPPs. (Hint: What formula have you used to help you compare locations already?)

Activities Part D:

Imagine you received job offers paying \$50,000 per year from three different companies, each located in a different state: the state you live in now, Hawaii, and Mississippi.

You want to figure out which job offers the most purchasing power where it's located, in other words, how far your money would go there.

- If you had to guess, do you think \$50,000 would buy more goods and services in Hawaii or Mississippi?
- Do you think living in your state is relatively expensive or inexpensive?

Use the states' regional price parities to find out in the problems below. (If you live in Hawaii or Mississippi now, choose a third state to use as "your state" in the problems.)

Show your work. This formula will help:

Nominal Income / (RPP / 100) = Income adjusted for regional price levels

10. What is the RPP-adjusted value of \$50,000 for your state?

50,000 / (Your State's RPP / 100) = Income adjusted by RPP

** If the RPP is above 100 your adjusted income will be less than the \$50,000 and if RPP is below 100 your adjusted income will be more than \$50,000.*

11. What is the RPP-adjusted value of \$50,000 for Hawaii?

Use the formula above with Hawaii's RPP instead of your state.

12. What is the RPP-adjusted value of \$50,000 for Mississippi?

Use the formula above with Mississippi RPP instead of your state.

13. Based solely on average statewide price levels (not considering, for example, differences between a state's cities and rural areas) in which state does a job paying \$50,000 have the most purchasing power?