



# Solve Multiplicative Comparison Problems

Let's solve real-world multiplicative comparison problems.



## Notice and Wonder: Two Cities

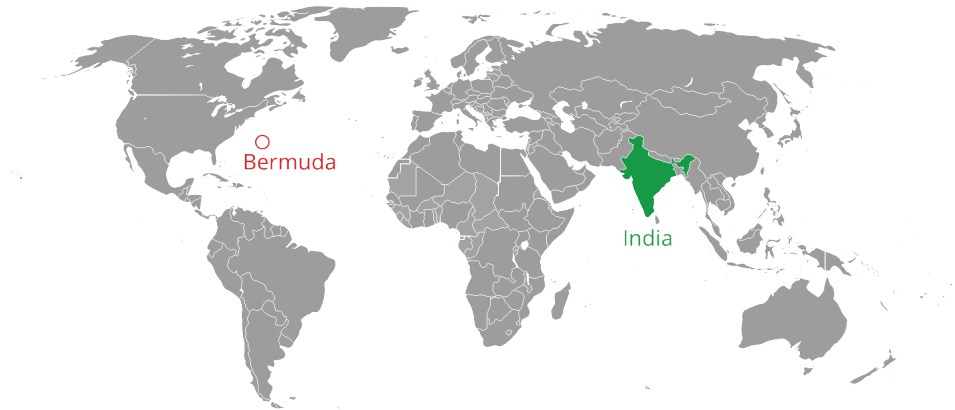
What do you notice? What do you wonder?

| 2023 prices                                                 | San Francisco, CA | Fort Wayne, IN |
|-------------------------------------------------------------|-------------------|----------------|
| population                                                  | 715,717           | 269,621        |
| milk (1 gallon)                                             | \$5.99            | \$2.79         |
| bread (1 loaf)                                              | \$4.79            | \$3.99         |
| gasoline (1 gallon)                                         | \$6.02            | \$3.56         |
| movie ticket                                                | \$17              | \$10.50        |
| internet connection (1 month)                               | \$89              | \$60           |
| rent for a 3-bedroom apartment in the city center (1 month) | \$5,000           | \$1,200        |
| cost of a house                                             | \$1,380,000       | \$210,000      |

## Activity 1

### The Most and the Least Expensive

Bermuda is one of the most expensive countries to live in the world. India is one of the least expensive.



1. The table shows how prices (in U.S. dollars) in Bermuda and India compared in 2023. Estimate or calculate the missing information in the table.

| 2023 prices<br>(U.S. dollars)   | Bermuda | cost in Bermuda is<br>___ as in India | India |
|---------------------------------|---------|---------------------------------------|-------|
| a meal with drink<br>(1 person) |         | 12.5 times as much                    | \$6   |
| gasoline (1 gallon)             | \$9     | 2 times as much                       |       |
| brand-name jeans                |         | 3 times as much                       | \$26  |
| men's leather shoes             | \$136   | 4 times as much                       |       |
| internet connection             |         | 13 times as much                      | \$11  |

2. In 2023, rent for a 1-bedroom apartment in Delhi (DELL-ee), the capital city of India, cost about \$182 per month. A similar apartment in Hamilton, Bermuda, costs 18 times as much.

Utilities (electric, gas, water, and heating) for a small apartment cost about \$65 per month in India and 2 times as much in Bermuda.

If a person earned \$3,500 per month, could they afford to pay rent and utilities in Bermuda?



## Activity 2

### The Cost of Living

The cost of living in the United States is higher than in Ghana.



1. The table shows how prices (in U.S. dollars) in the United States and Ghana compared in 2023.

| 2023 monthly cost<br>(U.S. dollars)          | United<br>States | cost in the US is ____ as<br>in Ghana | Ghana |
|----------------------------------------------|------------------|---------------------------------------|-------|
| 1-bedroom apartment in<br>city center        | \$2028           | 3 times as much                       |       |
| 1-bedroom apartment<br>outside city center   |                  | 17 times as much                      | \$82  |
| utilities for a<br>915-square-foot apartment | \$191            |                                       | \$47  |
| transportation pass                          | \$76             | 2 times as much                       |       |
| private preschool (1 child)                  | \$1218           |                                       | \$58  |

- b. Ghana? Explain or show your reasoning.