## Consumer Price Index

Use the information in this table to answer the questions that follow.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Price Per Pound Quantity in Pounds*** | **Year 1 Price** | **Year 1 Quantity** | **Year 2 Price** | **Year 2 Quantity** | **Year 3 Price** | **Year 3 Quantity** |
| **Tomatoes** | 2.75 | 52 | 3.00 | 60 | 3.25 | 56 |
| **Watermelon** | 0.40 | 90 | 0.44 | 100 | 0.42 | 100 |
| **Peanuts** | 4.00 | 87 | 4.10 | 100 | 4.25 | 92 |

1. Fill in the table below using Year 1 as the base year.

|  |  |  |
| --- | --- | --- |
|  | **Cost of Market Basket** | **Price Index Value** |
| **Year 1** |  |  |
| **Year 2** |  |  |
| **Year 3** |  |  |

1. Using the table you constructed, calculate the rate of inflation between Year 1 and Year 2.
2. Using the table you constructed, calculate the rate of inflation between Year 2 and Year 3.

Fill in the table below using Year 2 as the base year.

|  |  |  |
| --- | --- | --- |
|  | **Cost of Market Basket** | **Price Index Value** |
| **Year 1** |  |  |
| **Year 2** |  |  |
| **Year 3** |  |  |

1. Using the table you constructed, calculate the rate of inflation between Year 1 and Year 2.
2. Using the table you constructed, calculate the rate of inflation between Year 2 and Year 3.
3. How does the information when using Year 1 as the base year compare to the information when using Year 2 as the base year?

## Consumer Price Index Answer Key

Use the information in the table above to answer the following questions.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Price Per Pound Quantity in Pounds*** | **Year 1 Price** | **Year 1 Quantity** | **Year 2 Price** | **Year 2 Quantity** | **Year 3 Price** | **Year 3 Quantity** |
| **Tomatoes** | 2.75 | 52 | 3.00 | 60 | 3.25 | 56 |
| **Watermelon** | 0.40 | 90 | 0.44 | 100 | 0.42 | 100 |
| **Peanuts** | 4.00 | 87 | 4.10 | 100 | 4.25 | 92 |

* 1. Fill in the table below using Year 1 as the base year.

|  |  |  |
| --- | --- | --- |
|  | **Cost of Market Basket** | **Price Index Value** |
| **Year 1** | *(2.75 x 52) + (0.40 x 90) + (4.00 x 87)*  *= 143 + 36 + 348 = 527* | *(527 / 527) × 100 = 100* |
| **Year 2** | *(3.00 x 60) + (0.44 x 100) + (4.10 x*  *100) = 180 + 44 + 410 = 634* | *(634 / 527) × 100 = 120.3* |
| **Year 3** | *(3.25 x 56) + (0.42 x 100) + (4.25 x 92)*  *= 182 + 42 + 391 = 615* | *(615 / 527) × 100 = 116.7* |

* 1. Using the table you constructed, calculate the rate of inflation between Year 1 and Year 2.

*(120.3 – 100) / 100 × 100 = .203 x 100 = 20.3% increase in inflation*

* 1. Using the table you constructed, calculate the rate of inflation between Year 2and Year 3.

*(116.7 – 120.3) / 120.3 × 100 = -0.03 x 100 = 3% decrease in inflation*

* 1. Fill in the table below using 2013 as the base year.

|  |  |  |
| --- | --- | --- |
|  | **Cost of Market Basket** | **Price Index Value** |
| **Year 1** | *(2.75 x 52) + (0.40 x 90) + (4.00 x*  *87) = 143 + 36 + 348 = 527* | *(527 / 634) × 100 = 83.1* |
| **Year 2** | *(3.00 x 60) + (0.44 x 100) + (4.10 x*  *100) = 180 + 44 + 410 = 634* | *(634 / 634) × 100 = 100* |
| **Year 3** | *(3.25 x 56) + (0.42 x 100) + (4.25 x*  *92) = 182 + 42 + 391 = 615* | *(615 / 634) × 100 = 97* |

* 1. Using the table you constructed, calculate the rate of inflation between Year 1 and Year 2.

*(100 – 83.1) / 83.1 = .203 × 100 = 20.3% increase in inflation*

* 1. Using the table you constructed, calculate the rate of inflation between Year 2 and Year 3.

*(97 – 100) / 100 = -0.03 × 100 = 3% decrease in inflation*

* 1. How does the rate of inflation when using 2012 as the base year compare to the rate of inflation when using 2013 as the base year?

*It doesn’t matter which base year we choose, the rate of inflation stays the same even though the price index is different for each base year.*