**Three Approaches to GDP**

You are given the following information about the economy of Smalltown. Smalltown’s economy only has three industries manufacturing products made using rock from the nearby quarry. Henry builds block homes and uses no other materials. Abby sells aggregate rock that goes into the production process and Billy sells the blocks that Henry uses in his homes for sale.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Abby’s Aggregates** | **Henry’s Houses** | **Billy’s Block** | **Total**  **Factor Income** |
| **Value of sales** |  | $100,000 | $40,000 | --------- |
| **Intermediate goods** | 0 | 40,000 |  | --------- |
| **Wages** | 11,000 | 30,000 | 10,000 |  |
| **Interest payments** | 1,500 | 2,000 | 1,500 |  |
| **Rent** |  | 1,000 | 500 |  |
| **Profit** | 7,000 |  | 8,000 |  |
| **Total expenditures by firm** | $20,000 | $100,000 | 40,000 | ------- |
| **Value added per firm** |  | $60,000 |  | ------- |

* 1. Fill in the missing entries in the table above by measuring the value of the production of final goods and services produced in Smalltown.
  2. Calculate the value of Smalltown’s GDP using the value added approach. Explain.
  3. Calculate the value of Smalltown’s GDP using the factor income approach. Explain.
  4. Calculate the value of Smalltown’s GDP using the aggregate spending on domestically produced final goods and services approach. Explain.

# Three Approaches to GDP Answer Key

## You are given the following information about the economy of Smalltown. Smalltown’s economy only has three industries manufacturing products made using rock from the nearby quarry. Henry builds block homes and uses no other materials. Abby sells aggregate that goes into the production process and Billy sells the blocks that Henry uses in his homes for sale.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Abby’s Aggregates** | **Henry’s Houses** | **Billy’s Block** | **Total Factor Income** |
| **Value of sales** | **$*20,000*** | $100,000 | $40,000 |  |
| **Intermediate goods** | 0 | 40,000 | ***20,000*** |  |
| **Wages** | 11,000 | 30,000 | 10,000 | ***$51,000*** |
| **Interest payments** | 1,500 | 2,000 | 1,500 | ***5,000*** |
| **Rent** | ***500*** | 1,000 | 500 | ***2,000*** |
| **Profit** | 7,000 | ***27,000*** | 8,000 | ***42,000*** |
| **Total expenditures by firm** | $20,000 | $100,000 | 40,000 |  |
| **Value added per firm** | ***$20,000*** | $60,000 | ***$20,000*** |  |

1. Fill in the missing entries in the table above by measuring the value of the production of final goods and services produced in Smalltown.
2. Calculate the value of Smalltown’s GDP using the value added approach. Explain.

*$20,000 + $60,000 + $20,000 = $100,000 found by adding the value added by each firm.*

1. Calculate the value of Smalltown’s GDP using the factor income approach. Explain.

*$51,000 + $5,000 + $2,000 + $42,000 = $100,000 found by adding the factor incomes.*

1. Calculate the value of Smalltown’s GDP using the aggregate spending on domestically produced final goods and services approach. Explain.

*$100,000 because the house is the only domestically produced final good.*