# Multiplier Practice

Answer the following questions to demonstrate your understanding of the spending multiplier.

1. Dora earns $50,000 a year at her jobs. When she was given a raise of $5,000, her spending increased from $50,000 to $54,000. Calculate Dora’s MPC and MPS.
2. If MPC is 0.5 and the government increases spending by $3 billion, what is the change in real GDP?
3. Calculate MPC when a change in investment spending of $40 million leads to an increase in real GDP by $160 million.
4. Create a table showing the expenditure multiplier for each of the MPCs listed.

|  |  |
| --- | --- |
| **MPC** | **Multiplier** |
| 0.5 |  |
| 0.75 |  |
| 0.8 |  |
| 0.9 |  |

# Multiplier Practice Answer Key

Answer the following questions to demonstrate your understanding of multipliers.

1. Dora earns $50,000 a year at her jobs. When she was given a raise of $5,000, her spending increased from $50,000 to $54,000. Calculate Dora’s MPC and MPS.

*MPC =* ∆ 𝐶𝑜𝑛𝑠𝑢𝑚𝑒𝑟 𝑆𝑝𝑒𝑛𝑑𝑖𝑛𝑔 *=* $4,000 *= 0.8*

∆ 𝐷𝑖𝑠𝑝𝑜𝑠𝑎𝑏𝑙𝑒 𝐼𝑛𝑐𝑜𝑚𝑒 $5,000

*MPS = (1 – MPC) = (1 – 0.8) = 0.2*

1. If MPC is 0.5 and the government increases spending by $3 billion, what is the change in real GDP?

*∆GDP = Multiplier x ∆ Spending*

*∆GDP =* 1

(1−𝑀𝑃𝐶)

*x $3 billion =* 1 (1−0.5)

*x $3 billion =* 1

0.5

*x $3 billion = 2 x $3 billion*

*∆GDP = $6 billion*

1. Calculate MPC when a change in investment spending of $40 million leads to an increase in real GDP by $160 million.

*∆GDP = Multiplier x ∆Spending*

*$160 million =* 1 (1−𝑀𝑃𝐶)

$160 𝑚𝑖𝑙𝑙𝑖𝑜𝑛 *=* 1

*x $40 million*

$40 𝑚𝑖𝑙𝑙𝑖𝑜𝑛

*4 =* 1

(1−𝑀𝑃𝐶)

(1−𝑀𝑃𝐶)

*4(1-MPC) = 1*

*4 – 4MPC = 1*

*-4MPC = 1-4*

*-4MPC = -3*

*MPC =* −3 *=* ***0.75***

−4

1. Create a table showing the expenditure multiplier for each of the MPCs listed.

|  |  |
| --- | --- |
| **MPC** | **Multiplier** |
| 0.5 | *2* |
| 0.75 | *4* |
| 0.8 | *5* |
| 0.9 | *10* |