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Explanation of Week 3 Quiz Question #30 - pasted here

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Hi, I got a question wrong on this week 3's quiz, but got the rest of them correct. I was wondering if someone could help explain this one I got incorrect. It is pasted below. Thanks.

Question 30

Suppose the U.S. permanently decreases defense spending by \$100 billion after troops pull out of Afghanistan. How much will GDP be reduced assuming an MPC of 0.75?

Answer Choices:

- \$500 billion
- \$300 billion
- \$100 billion
- \$400 billion
- \$200 billion

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The answer is \$400 billion. Refer to the multiplier formula for closing a GDP Gap. The necessary expenditure to close a gap = gap/multiplier. In this case, the \$100 billion reduction is treated as the necessary expenditure. So, \$100b = gap/4. We know the multiplier or denominator of the equation is 4 because the multiplier = $1/1-MPC = 1/1-.75 = 1/.25 = 4$. So, \$100b = gap/4. Rephrased, $GAP = \$100b * 4 = \$400b$.

Look at it another way. If there were an inflationary gap of \$400b and the MPC were .75, by how much would the government have to cut spending to close this gap? Well, we know the multiplier is 4. $\$400b/4 = \$100b$. So, we know that a \$100b reduction in spending will reduce GDP by \$400b. Thus, a reduction in defense spending of \$100b will reduce GDP BY \$400b when the MPC is .75.

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Karen West · just now 🔒



Thank you very much for your help! ;-)

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Pamela M. Egan Signature Track · 10 hours ago 🔒

To put it more simply, we know the multiplier is 4 because $\text{multiplier} = 1/1 - \text{MPC} = 1/1 - .75 = 1/.25 = 4$. Therefore, A \$100b change in spending will have a \$400b impact on GDP.

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Anonymous · 3 hours ago 🔒

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