Discount Factors and Depreciation - Python Exercise

# Question:

Calculate the future value of a $100 investment that depreciates in value by 5% per year for 10 years.

# Question Explanation (20 words):

We need to compute how much a $100 investment is worth after 10 years with a 5% annual depreciation rate.

# Answer (Code):

# Calculate the future value with depreciation  
initial\_investment = 100  
growth\_rate = -0.05  
growth\_periods = 10  
future\_value = initial\_investment \* (1 + growth\_rate)\*\*growth\_periods  
print("Future value: " + str(round(future\_value, 2)))

# Answer Explanation (20 words):

The formula uses a negative growth rate to calculate depreciation, applying compound interest logic over the defined time period.

