$$\frac{9\% \text{ NW}}{\times 5\% \text{ Growth}}$$

$$= \underline{\qquad} \text{ ROA}$$

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QUESTION 1 ANSWER

0.45% ROA
or
45 bps ROA

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11% NW

x 8% Growth

$$= \underline{\qquad} \text{ROA}$$

1 bps = 0.01%

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QUESTION 2 ANSWER

0.88% ROA
or
88 bps ROA

8% NW

x _____% **Growth**

= 80 bps ROA

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10% Growth

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QUESTION 4

You have **10% net worth**, expect to **grow 7%**, and **earnings are expected to be 0.50%**.

What would you estimate the **net worth** to be in **a year**?

QUESTION 4

Step 1:

10% NW x 7% Growth = 70 bps ROA (keeps 10%)

Step 2:

0.50% ROA – 0.70% ROA = -0.20% or -20 bps ROA

Step 3:

10% NW – 20 bps ROA = _____ NW

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QUESTION 4 ANSWER

9.80% NW

QUESTION 5

You expect to **grow 10% each year for the next three years**. During that time, you want to **increase net worth from 10% to 11%**.

What would your **ROA need to average** over that period?

QUESTION 5

Step 1:

10% NW x 10% Growth = 1% or 100 bps ROA

Step 2:

11% NW – 10% NW = 1% (NW up 100 bps)

QUESTION 5 CONTINUED

Step 3:

100 bps NW / 3 years ≈ 0.33% or 33 bps

Step 4:

0.33% + 1.00% = _____ **ROA**

1.33% ROA
or
133 bps ROA

$$\frac{\text{0.9\% Yield Increase}}{\text{x 2\% Assets}} = \underline{\qquad} \text{ More ROA}$$

QUESTION 6 ANSWER

Increase 0.018% ROA
or
≈ 2 bps ROA

$$\approx 2.15\% \text{ Net Yield Increase*}$$

$$\underline{x\ 2\%\ \text{Assets}}$$

$$= \underline{\qquad}\ \textcolor{red}{\textbf{More ROA}}$$

*Net of PLL

Increase 0.043% ROA

or

≈ 4 bps ROA

$$\frac{\text{1.00\% Lower COF} \times \text{20\% (\$200M/\$1B)}}{\text{\_\_\_\_}} = \text{\textcolor{red}{More ROA}}$$

QUESTION 8 ANSWER

Increase 0.20% ROA

or

≈ 20 bps ROA

$$\frac{\text{1.50\% Lower COF} \times \text{20\% (\$200M/\$1B)}}{} = \underline{\hspace{3cm}} \text{More ROA}$$

Increase
0.30% ROA
or
≈ 30 bps ROA

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0.80% ROA

x 90%

= _____ ROA

QUESTION 10 ANSWER

0.72% ROA

QUESTION 10 BONUS

If the **10% growth**, **costing 10 bps**, is **invested at 30 bps**…

the **dollars of net income** would indeed **increase** in this situation, but the **ROA** would actually **drop**. Think of it as an **80 bps ROA** on **90% of your structure**, and a **20 bps ROA** on roughly **10% of your structure**.

So the growth would pull your **ROA down**.

QUESTION 10 BONUS

To estimate the **resulting ROA**:

The **0.80%** on **90% of the structure** would be the same **0.72% in Question 10**, but the **10% of the structure earning 0.20%** would add about **2 bps**.

So you would tell them that your ROA would decrease to about **74 bps or 75 bps**.

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