

# Financial Functions Practice #A2 (Page One)

<p><b>1. You are twenty years old and currently have no savings. You plan to retire at age 55 years. If you start to save \$3,500 per year at age 20, how much will have been saved at retirement? Assume you will earn a 5% return on your savings.</b></p>	<p><b>1.</b></p>
<p><b>2. Your client has been offered two options for the settlement of a dispute with his insurance company. You must help him to choose the option with the highest present value.</b></p> <p><b>Option One: \$45,000 per year for 7 years</b></p> <p><b>Option Two: \$600,000 paid in a lump sum in 10 years.</b></p> <p><b>Assume an annual rate of return of 7%.</b></p> <p><b>2A. Present Value of Option One</b>  <b>2B. Present Value of Option Two</b>  <b>2C. Which option should the client choose?</b></p>	<p><b>2A.</b></p> <hr/> <p><b>2B.</b></p> <hr/> <p><b>2C.</b></p>
<p><b>3. You qualify for a home loan of \$450,000 at an annual interest rate of 3.7% and a loan term of 30 years. What will be your monthly payment?</b></p>	<p><b>3.</b></p>
<p><b>4. You are currently twenty-five years old and have set a savings goal of \$1,200,000 for when you reach 70 years old. You presently have savings of \$50,000 and no debt. How much must be saved each year to attain your savings goal of \$1,200,000? Assume you can earn an annual return of 6% on your savings.</b></p>	<p><b>4.</b></p>
<p><b>5. Three hundred bonds with a face value of \$30,000 pay \$1,000 per year and mature in 16 years. How much should an investor pay for this investment if they desire a 7% annual return?</b></p>	<p><b>5.</b></p>
<p><b>6. Four hundred fifty strip bonds with a face value of \$45,000 mature in 10 years. How much should an investor pay for this investment if they desire a 6.0% annual return?</b></p>	<p><b>6.</b></p>
<p><b>7. You and your spouse earn \$120,000 per year, and want to spend only 35% of your income on a mortgage payment. You qualify for a 15-year loan at an annual rate of 3.7%. Find how much you can borrow with these limitations.</b></p>	<p><b>7.</b></p>
<p><b>8. You are currently twenty-five years old and have set a savings goal of \$1,000,000 for when you reach 65 years old. You presently have no savings or debt. How much must be saved each year to attain your savings goal of \$1,000,000? Assume you can earn an annual return of 7% on your savings.</b></p>	<p><b>8.</b></p>

# Financial Functions Practice #A2 (Page Two)

<p><b>9. You are twenty-five years old and currently have no savings. You have only one debt, a \$60,000 student loan. You plan to retire at age 80 years. If you start to save \$4,000 per year starting at age 25, how much will have been saved at retirement? Assume you will earn a 6% return on your savings.</b></p>	<p><b>9.</b></p>												
<p><b>10. - 11. An investment is projected to earn the following net operating incomes.</b></p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Year</th> <th style="text-align: left;">Net Operating Income</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">1</td> <td style="padding-left: 20px;">\$90,000</td> </tr> <tr> <td style="padding-left: 20px;">2</td> <td style="padding-left: 20px;">\$97,000</td> </tr> <tr> <td style="padding-left: 20px;">3</td> <td style="padding-left: 20px;">\$103,000</td> </tr> <tr> <td style="padding-left: 20px;">4</td> <td style="padding-left: 20px;">\$109,000</td> </tr> </tbody> </table> <p><b>At the end of the four-year holding period, the investment is sold for net proceeds of \$900,000.</b></p>	Year	Net Operating Income	1	\$90,000	2	\$97,000	3	\$103,000	4	\$109,000	<p><b>10.</b></p>		
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<p><b>10. Find the net present value of this investment if you want to earn a 9% rate of return.</b></p> <p><b>11. What is the rate of return if you pay \$875,000 for this investment? (Report to nearest tenth %)</b></p>	<p><b>11.</b></p>												
<p><b>12. Provide an income statement estimating Year 4 Net Operating Income for this property.</b></p> <ul style="list-style-type: none"> <li>• 15-unit apartment building with all two-bedroom units.</li> <li>• Each unit will rent for \$1,200 per month in year one.</li> <li>• Rents will increase 4% each year.</li> <li>• Estimate vacancy and collection loss at 6% of gross income.</li> <li>• Annual expenses in year one will be \$50,000, and are projected to increase at 7% annually.</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-top: 1px solid black; width: 50%;"></td> <td style="border-top: 1px solid black; width: 50%;"></td> </tr> <tr> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> </tr> <tr> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> </tr> <tr> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> </tr> <tr> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> </tr> <tr> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> </tr> </table>													