Financial Mathematics

Curriculum Expectations

By the end of this course, students will:

- make and describe connections between compound interest, geometric sequences, and exponential growth
- solve problems that involve the calculation of the future value, principal (present value) or the interest rate per compounding period, using the compound interest formula
- determine the number of compounding periods, using the compound interest formula, and describe strategies for calculating this number
- explain the meaning of the term annuity, and determine the relationships between ordinary simple annuities, geometric series, and exponential growth
- determine the effects of changing the conditions of ordinary simple annuities
- solve problems that involve the future value, present value, and regular payment of an ordinary simple annuity

Schedule of Topics

Day	Topic	Homework	Questions?
1	Compound Interest (Future Value)	p.433 #1-14	
2	Compound Interest (Present Value)	p.441 #1-15	
3	Annuities (Future Value)	p.453 #2-12	
4	Annuities (Present Value)	p.461 #2-13	
5	Mortgages	Worksheet	
6	Review	p.464 #4-16	

Assessment and Evaluation

Quiz/Test/Task	Date	K	A	T	C

Skills Checklist

At the end of this strand, I am able to:

• Calculate the future values of investments earning compound interest, compounded annually	[ ] Always	[ ] Often	[ ] Seldom
• Calculate the future values of investments earning compound interest, given specific compounding frequencies	[ ] Always	[ ] Often	[ ] Seldom
• Calculate the annual interest rate required to achieve a specified future value of an investment	[ ] Always	[ ] Often	[ ] Seldom
• Calculate or estimate the time required for an investment to grow to a specified future value	[ ] Always	[ ] Often	[ ] Seldom
• Calculate the principal (present value) that is required for an investment to reach a specified future value	[ ] Always	[ ] Often	[ ] Seldom
• Calculate the future value of a simple annuity	[ ] Always	[ ] Often	[ ] Seldom
• Calculate the present value of a simple annuity	[ ] Always	[ ] Often	[ ] Seldom
• Calculate or estimate the time required for a simple annuity to reach a specified future value	[ ] Always	[ ] Often	[ ] Seldom
• Calculate or estimate the time over which a simple annuity will continue to pay out	[ ] Always	[ ] Often	[ ] Seldom
• Calculate future and present values of mortgages	[ ] Always	[ ] Often	[ ] Seldom

Student Comments

Parent/Guardian Comments

Teacher Comments