

GEN104 AV Math Online

Course Outline

Course Introduction

- Welcome
- Introduction to AV Math Online
- Course Audience
- Math and the General CTS Exam
- Course Syllabus
- How to Take this Course
- Course Navigation and Support
- Quizzes, Tests and Course Completion

Math Refresher

- Using a Scientific Calculator
- Course Conventions
- Using Proper Order of Operations
- Sample Order of Operations Calculation One
- Sample Order of Operations Calculation Two
- Section Test

Unit Conversions

- Conversions between US Customary and Metric
- Sample US Customary and Metric Conversion Calculations
- Converting Dimensions on Scaled Drawings
- Sample Dimension Conversion Calculations
- Section Test

Applied Math: Part One

- Aspect Ratio
- Determining Aspect Ratio
- Sample Aspect Ratio Calculations
- Aspect Ratio Practice Problems
- Throw Distance
- Estimating Projection Throw Distance
- Sample Projection Throw Distance Calculations
- Throw Distance Practice Problems
- Section Test

Applied Math: Part Two

- Image Height and Viewing Task
- Calculating Image Height by Task
- Sample Image Height Calculations
- Farthest Viewer by Task
- Calculating Farthest Viewer by Task
- Sample Farthest Viewer by Task Calculations
- Calculating Farthest Viewer by Text Height
- Sample Farthest Viewer by Text Height Calculations
- Farthest Viewer Practice Problems
- Section Test

Applied Math: Part Three

- Impedance and Loudspeakers
- Predicting Impedance of a Loudspeaker Circuit
- Sample Loudspeaker Impedance Calculations
- Loudspeaker Impedance Practice Problems
- Decibels Introduction
- Calculating Decibels
- Sample 10 and 20 log Decibel Calculations
- Inverse Square Law
- Calculating Inverse Square Law for Light
- Calculating Inverse Square Law for Sound
- Sample Inverse Square Law Calculations
- Inverse Square Law Practice Problems
- Section Test

Applied Math: Part Four

- Ohm's Law
- Circuits
- I, V, R and W
- Current and Voltage
- Current and Resistance
- Current and Power
- Sample Ohm's Law Calculations
- Ohm's Law Practice Problems
- Calculating Heat Load
- Sample Heat Load Calculations
- Conduit Capacity Considerations
- Calculating Conduit Capacity
- Sample Conduit Capacity Calculations
- Conduit Capacity Practice Problems
- Section Test

Course Conclusion

- Completion Certificate
- Your Professional Development
- Course Evaluation
- Course References
- Course Acknowledgements