

# Math Review & Prep for Operator Level 3 & 4 Certification Exam Live Online Workshop



Water & wastewater math is complex and can be challenging. Our **live online “Math Review and Prep for Operator Level 3 & 4 Certification Exam”** workshop consists of four 3 hour sessions, totalling 12 hours.

This is perfect for operators who understand the principles of water and wastewater math and are interested in obtaining their Wastewater Treatment Operator level III or IV certificate. In this workshop you will learn not to just plug numbers into formulas but what the formulas actually mean and how to apply them. The math exercises you will work through in this class are complex and reflect the type of questions commonly encountered in the level III and IV certification exams.

A basic understanding of math and common water math formulas is necessary to achieve full benefits of this class.

Although this workshop will cover **advanced applied math for operators**, we will start with a brief refresher on basic math functions. Just like in a good exercise program you will first warm up those rusty brain cells by learning about fractions, decimals, percentages, ratios, unit conversions, area and volume measurements, unit analysis, and solving for the “unknown (x)”. Once you are comfortable with those concepts you'll learn about flows, velocity, settling rate,

detention time, loading rates, solids removal, and other calculations related to the treatment process. To make sure you understand how to properly select and troubleshoot pumps you will also explore formulas dealing with pump rates, pump capacity, static and dynamic head, horsepower, etc. And, of course, we will cover calculations related to disinfection such as dosage, demand, residual, and chlorine availability in gas, liquid, and solid feed systems.

Through out the workshop we will utilize real life scenarios to demonstrate how these formulas are used in your daily life as an operator. To help you better understand and become comfortable with how to use these formulas we will work through a variety of complex “word problems” reflecting situations you may encounter in the field, treatment plant, or laboratory. We will discuss the problems you may encounter and share tricks for how to “master operator math”.

This **live online “Math Review and Prep for Operator Level 3 & 4 Certification Exam”** workshop will help you with essential math skills necessary to succeed in your career and obtain or maintain your water or wastewater operator certification.