

the pipeline

Spring 2023 ~ 29th Edition

SASKATCHEWAN WATER AND WASTEWATER ASSOCIATION

Hand-drawn mathematical content on a dark background:

- Trigonometry:**
 - $\cos 2x = \cos^2 x - \sin^2 x$
 - $\frac{\partial z}{\partial x} = 2; \frac{\partial z}{\partial y} = 0 \quad \vec{n} = (F'_x; F'_y; F'_z)$
 - $\sin(x+y) = \sin x \cos y + \cos x \sin y$
 - $\tan x \cdot \cot x = 1$
 - $\frac{\sin x}{x} \leq \frac{x}{x} = 1$
 - $a^2 + b^2 = c^2$
 - $a^2 = b^2 + c^2 - 2bc \cos \alpha$
 - $\eta = \lambda^2 - 3\lambda + 1 = 0$
 - $\sum_{i=0}^n (P_i(x) - y_i)^2$
- Calculus:**
 - Graphs of $y = \sin x$, $y = \sin 2x$, and $y = \cos x$.
 - Graphs of $y = x$ and $y = \tan x$.
 - Graphs of $y = \cot x$ and $y = \tan x$.
- Geometry:**
 - Right-angled triangle with sides a, b, c and angles A, B, C .
 - Triangle with sides a, b, c and angle α .
 - Circle with radius r and angle x .
- Algebra:**
 - $b^2 = c \cdot c$
 - $a^2 = c \cdot ca$
 - $|z| = \sqrt{a^2 + b^2}$
 - $A+B+C = 8$
 - $-3A-7B+2C = 193$
 - $-18A+6B-3C = -16$
 - Binomial coefficients: $1, 4, 6, 4, 1$ (for $n=4$).



Back to Basics