

ENGG1003 - Monday Week 8

Solving nonlinear algebraic equations
& computing integrals

Steve Weller

University of Newcastle

26 March, 2021

Last compiled: April 21, 2021 5:25pm +10:00

Lecture overview

- 1 Solving nonlinear algebraic equations pp. 175-176
 - ▶ generic
 - ▶ three problems: flight time, fluid level, breaking spring
- 2 Bisection method §7.7
- 3 Secant method §7.3
 - ▶ Newton–Raphson method
- 4 Computing integrals §6

1) Solving nonlinear algebraic equations

- XXX

● XXX

2) Bisection method

- XXX

● XXX

3) Secant method

- XXX

● XXX

4) Computing integrals

- XXX

● XXX

Lecture summary

- Solving nonlinear algebraic equations
- Bisection method
- Secant method
 - ▶ Newton–Raphson method
- Computing integrals