ALGEBRA

MEET STEPHEN

Principal Engineer, Fairhurst

SUBJECTS STUDIED AT SCHOOL

Standard Grades (now Nat 5s) in:

Maths • Physics • Chemistry • English • French
Art & Design • Home Economics

Highers in:

Maths • Physics • English • Art & Design
Home Economics • Geography

FURTHER EDUCATION: University – BEng (Hons) Structural Engineering With Architectural Design, Heriot-Watt University

CAREER JOURNEY SO FAR

Worked both on site delivering projects, as well as working within the design office

12 years of experience all over Scotland.

Bridges focused until March this year.

Covering all things that fall within the Civil Engineering field at Fairhurst.

FUTURE ASPIRATIONS

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To continue to grow and develop the team I work in, as well as continuing to deliver a wide variety of engineering projects.

Q&A WITH STEPHEN

What does your company/organisation do?

Fairhurst are a design consultant, offering a solution to clients on how to look after their structures and how best to look after them in the future. In short, we make sure the structure can continue to be used in the future with no problems.

What types of activities do you do in your job?

Currently I have a number of different projects on my desk – lighthouses, bridges and tunnels. My day involves speaking to clients and also the team in order to progress the design solutions.

What does a typical day at work look like for you?

There is no such thing as a typical day in my job! However usually the key things I do are:

- giving the team design guidance and discussing solutions with them’
- reading reports,
- signing off drawings and calculations,
- putting together specification and costing documents.

What are your favourite things about your job?

The fact that no two days are the same is great. It is really exciting being able to adapt to things and also work on a mixture of projects on a daily basis.

HOW STEPHEN USES ALGEBRA AT WORK

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Within the workplace, maths is a big part of our design process. The design standards and codes we use to help us with our projects are used all over Europe, so algebra is very important to be an Engineer.

ACTIVITIES

Problem 1

Using design codes an equation of P = 3(u – 7) is shown. We require to calculate ‘u’ through change of subject formula.

What is the new equation?

Problem 2

In bridge design, design code equations are provided with brackets. Please remove the brackets from the following equation:

6v(5v – 4z)

Solutions

Problem 1

u = P/3 + 7

Problem 2

30v2 – 24vz