



Ali

JOB

Facility Management Director

COMPANY

Avison Young

How I use maths in my role

I use maths everyday as it's vital to my role. Excel helps me and my team budget, forecast, plan labour, and compare quotes. We also use maths for reviewing water sampling results, comparing footfall year-on-year, building measurements, checking and comparing test results, creating reports including graphs, and in general problem solving for reporting purposes.

What I do

I manage a team of around 100 Facilities Managers who provide Facilities services at commercial properties nationally.

What three skills are most useful for your role?

Communication, problem solving and providing evidence based solutions.

What I love about my career and maths

In Facility Management no two days are the same and this is not a 9 – 5 desk based job. Facility Managers need to be out and about in their properties talking to occupiers and contractors, solving problems and managing the works and the practical application of process and procedure. The variety is what first interested me in facility management, and the fact there is always something to be fixed or solved.

My hobbies

I have always played team sports, which I think helps with the understanding of working together to a common goal. I am a big gym goer and love strength training which is about being personally and mentally strong and agile for me.

How maths has helped me in everyday life

I think generally being mathematically agile is vital in general life. Being easily able to convert what you are spending in foreign currency for example when on holiday. Understanding or being able to make a rough calculation of the chance of something happening and then making risk-based decisions. Managing your day-to-day ingoings and outgoings so as not to live beyond your means.

My education

I have GCSEs and A-levels in science subjects and Mathematics as well as a BA in Business Economics and Master's degree in Facilities and Environmental Management.

My career advice

If you can solve problems, like dealing with people and thinking on your feet, then Facility Management is a varied and interesting career for practical people with common sense and a desire to make things better.



Amanda

JOB

Head of REMS Product Team

COMPANY

Avison Young

How I use maths in my role

I use maths directly via Excel and programming formulas. I do business plan budgeting and troubleshoot financial transactions and report balances. I use maths indirectly via programming logic and workflows.

What I do

I lead a team responsible for the support and continuous improvement of software systems used by the Real Estate Management Team. This includes: day-to-day support of several software systems, use of Excel and other Microsoft tools, programming to find issues, writing reports and business planning. I also develop training, provide demonstrations and host consultations with clients.

What three skills are most useful for your role?

Communication, problem solving and attention to detail.

What I love about my career and maths

I love working with people and software/computers, combined with the skills of property management, accounting and management. I hated maths in school as I was never really good at it and often could not visualise real world applications to what I was learning. Years later I can!

My hobbies

I like to travel and also travel constantly to clients. Yoga and walking help with patience, determination and perseverance. Puzzles (games or jigsaws) help with agility, perseverance and thinking outside the box.

How maths has helped me in everyday life

It has helped me manage my own company – budgeting, financial reporting, etc. It has also helped with personal budgeting, DIY and travelling - in particular calculating mileage.

My education

Diploma in Information Technology.

My career advice

Arm yourself with the foundations in GCSEs or A-levels and then explore the areas you enjoy in higher levels of education. The foundations will serve you well in life as well as in your future career. Many disciplines are diverse and service many industries. While you start off in one area of expertise you may have the opportunity of branching out, and those initial foundations might be critical.



Amy

JOB

Director

COMPANY

Avison Young

How I use maths in my role

I use maths everyday, from setting budgets of up to £9million for the buildings and ensuring each occupier pays the correct apportionment. I work with our Accounts Team for rent collection and reporting VAT to clients. We advise clients on potential new lettings, calculating rental income and reporting on statistics. Excel is a key part of our role.

What I do

I manage large office buildings for their owners, to ensure that their asset grows in value and provides services for those that rent space and occupy the properties. This involves many different aspects, such as contractor management, client reporting, budget setting and reconciling as well as high levels of customer service.

What three skills are most useful for your role?

Problem solving, multitasking and customer service.

What I love about my career and maths

I can do something different every day, there is always a new problem to solve. All buildings are different and we deal with so many companies, from tenants to contractors to clients.

My hobbies

I exercise a lot which helps keep my mind active and switched on.

How maths has helped me in everyday life

Maths has helped me with running a busy family home life, budgeting for bills and works being done.

My education

I have GCSEs and A-levels.

My career advice

A strong set of core subjects such as maths and science will be a great start to the property industry. Once in the property field there are so many different paths you can take and a lot of the large real estate firms do great graduate training schemes.



Andrew

JOB

Data Analyst

COMPANY

Offshore Renewable Energy
Catapult

How I use maths in my role

I use maths to create metrics which help the industry tell if they're doing well or not. For example, you can tell if your windfarm is doing well from the percentage of time your windfarm is running at full speed. Processing all the information to get these metrics often involves a lot of number crunching and a little bit of statistics too.

What I do

I run the technical side of a project that sets the benchmarks in performance for offshore windfarms. This means that we can tell if certain windfarms are doing well compared to similar ones. Day-to-day this involves writing code in Python, analysing and visualising data and lots of chats with knowledgeable people across industry.

What three skills are most useful for your role?

Problem solving, communication and an eye for detail are all important.

What I love about my career and maths

I chose to do a degree in Mathematics because I wanted to apply my analytical mindset and to challenge my logical and creativity thinking. Now I get to do this every day in my job with exciting and versatile projects in a fast-growing industry. Best of all, I get to do this and get to work with a wide range of people across industry.

My hobbies

I have always been a big fan of travelling which has helped me communicate with a diverse range of people. I also enjoy sport and playing games, which require logical thinking and good communication to do well in.

How maths has helped me in everyday life

Whilst I don't use everything I learned in maths at school in my personal life, the mindset that it instilled in me has a profound effect on the way I think and act. From the way I plan a meal to the way I play a board game, studying maths built up my mental muscles to think in more logical and analytical ways.

My education

As well as studying sciences in school, I did a Bachelor's degree in Mathematics. I also wanted to apply this to a field so studied Socio-ecological Economics and Policy as a Master's degree.

My career advice

I would recommend Mathematics as a field of study to anyone, but it is also important to keep other interests alive if you have a specific career path in mind. Make sure to get involved in things outside the classroom and read as much as you can to get an idea of the topic.



Anna

JOB

Associate Practitioner in Molecular Pathology

COMPANY

University Hospital Southampton

How I use maths in my role

I use Excel for ordering, stock control and to calculate the significance of peaks in DNA fragment analysis. I use maths to calculate sample concentration dilutions, mol concentration and percentage tumour content.

What I do

I extract DNA and RNA from patient samples for diagnostic purposes and run/interpret genetic tests mostly for cancer.

What three skills are most useful for your role?

Communication, multitasking and teamwork.

What I love about my career and maths

I love that I make a difference, my results affect the treatment of patients during a horrible time in their lives. Genetics affects everything and cancer genomics is rapidly growing as a field so it's exciting, we keep finding new things to help people. I originally was interested in evolution and paleontology but genetics took my interest at university.

My hobbies

I paint and sew, my most recent project was a tailored lined double-breasted coat for my husband, it helps develop project management, visualisation of a multistage process and fine motor skills.

How maths has helped me in everyday life

It was very helpful in understanding my mortgage and student loans and for household budgeting.

My education

I have GCSE Science, English and Maths to A or above. A-levels in science subjects and a BSc in Biology. I am currently studying for a MSc in Genomic Medicine.

My career advice

Look at which universities offer registration, lots of courses offer biomedical science and not all qualify you to be a Biomedical Scientist in the NHS. Read around your interests. If you are thinking of a well known profession e.g. Doctor but don't quite have the grades or experience, think about what appeals about that profession and look at similar alternatives e.g. Radiologist, Dentist, Clinical Scientist. Look through NHS jobs.



Bob

JOB

Computer System Manager

COMPANY

Royal Holloway University of London

How I use maths in my role

Maths is about thinking clearly - essential when dealing with computers. Maths helps me to work out how to use a package; debug a program; work out why a network is overloaded and what needs upgrading to improve performance. It's important to be comfortable with numbers when planning, especially financial planning.

What I do

I manage the department's computer services, and provide support to students and academics who use these services.

What three skills are most useful for your role?

Understanding a user's problem and communicating the answer in language they can understand, keeping a clear head when dealing with a crisis and being happy to venture into unfamiliar areas.

What I love about my career and maths

I most enjoy writing short computer programs, though it is only a small part of my job. My father worked with very early computers, so as a child in the 1960s I was already aware of and interested in computers. Both my parents had maths degrees, and my siblings and I picked up their joy in all things mathematical.

My hobbies

Sport is good for relaxing the mind after a stressful day. Going for a walk is a great way of clicking the brain into problem solving mode. Singing in a choir is brilliant for engendering a sense of team work.

How maths has helped me in everyday life

Household budgeting is impossible without a good level of numeracy.

My education

I have an Honours degree in Mathematics from Cambridge University.

My career advice

Once you have your foot on the jobs ladder decide which aspects you enjoy most and look for a job which will make you happy.



Callum

JOB

SFX Technician

COMPANY

Film industry

How I use maths in my role

Engineering is a big part of my job so I use a lot of mental arithmetic and the Pythagoras theorem – I have to make sure everything I produce is both safe and fits the job!

What I do

I create practical and special effects for the film industry using numerous engineering skills.

What three skills are most useful for your role?

Creativity, problem solving and team work.

What I love about my career and maths

I like the practical nature of the job and that everyday is a new challenge.

My hobbies

I play football and I like listening to music.

How maths has helped me in everyday life

Budgeting for shopping, bills etc.

My education

I have GCSEs and A-levels in science subjects and Mathematics.

My career advice

Don't give up.



Carolina

JOB

Head of Maths

COMPANY

Broomwood Hall School

How I use maths in my role

I teach it every day. I also use maths to analyse results and write Excel codes to solve problems.

What I do

I teach maths to 8 to 13 year-old girls in a private school. I also run my department of 11 teachers and monitor what they are doing day-to-day as well as writing the curriculum.

What three skills are most useful for your role?

Leadership, problem solving and explaining things clearly.

What I love about my career and maths

Nothing is ever the same day-to-day, and I get to use maths all day.

My hobbies

Board games, for working in teams and for communication and problem solving.

How maths has helped me in everyday life

Budgeting and saving money when making big buys.

My education

I have GCSEs, my A-levels are in Maths, Further Maths, Chemistry, Spanish, Music and Philosophy. I have a Master's degree in Maths and a PGCE for teaching.

My career advice

It's tough but I love it. Keep doing whatever you love, get good at it, and you'll find a job.



Caroline

JOB

Head of Business Development

COMPANY

Avison Young

How I use maths in my role

I use mental arithmetic to quickly work out costs or time allocations during pitches, presentations, or even discussions with prospective clients – if they give a project delivery cost, I can work out cost over time / space / per company. I use Excel for modelling costs to deliver quotes. I use graphics and charts to show trends and insights.

What I do

I seek opportunities for us to win new investor clients to deliver building and treasury management for. I use Excel to approach modelling of our costs to deliver future pieces of work to understand how best to price proposals for clients. I also use Excel for project planning.

What three skills are most useful for your role?

Communication of messages to different audiences, observation and analytical skills to identify real problems or points of pain that we can resolve. Resilience - we don't always win work despite putting in a lot of time and effort.

What I love about my career and maths

Variety, mix of creative and analytical skills required.

My hobbies

Playing sport - helps understand what being a team player really is, and valuing other skill sets. Listening to music - it's methodical and mathematical in structure and I find it therapeutic in many ways!

How maths has helped me in everyday life

Budgeting and finance in buying my own home. Budgeting and planning for family requirements. Negotiating deals for holidays, utilities, cars and mortgages!

My education

GCSEs, A-levels, Open University degree, Chartered Institute of Marketing.

My career advice

I would have taken Maths and/or Economics to open more doors in commercial environments. They can be applied to a much broader range of roles than probably any other subject. While I was good at maths and science, I chose a humanities route. Maths or Economics would have been more beneficial throughout my career.



Charlotte

JOB

Fund Manager

COMPANY

Troy Asset Management

How I use maths in my role

The maths I use in my role isn't rocket science, but a basic understanding of the laws of compounding, and a few other skills like modelling and pattern recognition are invaluable.

What I do

I meet with management teams, analyse company reports and accounts and decide what are the best businesses to invest in on behalf of our clients.

What three skills are most useful for your role?

Judgement of people and trends, analytical skills and understanding incentives and human behaviour.

What I love about my career and maths

I love learning about the world and the new business trends that are shaping it. A big part of this is how companies can become more socially and environmentally responsible. I also love working to deliver a good investment result for our clients; if you get it right, you can make a hugely positive impact on people's lives.

My hobbies

I've always played sports, both team sports and running/ cycling. The team work, but also grit and determination required when running around a hockey pitch in the freezing Scottish winter is helpful training! I'm quite artistic and love painting. The discipline required to sit down and produce a painting is helpful in my current role as an investor. I've always been part of women-led clubs and initiatives, most recently co-founding the charity GAIN in 2019 to inspire more young women to get into investing.

How maths has helped me in everyday life

Investing savings. Understanding how companies operate, e.g. I rarely buy luxury brands – they make great investments but if you look at their financials, the cost of the product/ raw materials is minimal versus what they spend on marketing!

My education

I don't actually have an A-level in Maths, although I would recommend it for those looking to get into investing. I have the Chartered Institute for Securities & Investment (CISI) diploma and Chartered Financial Analyst (CFA) qualification. My degree was in Modern and Medieval Languages.

My career advice

Get involved with GAIN – Girls Are Investors – www.gainuk.org.



Claire Coutinho

JOB

**Member of Parliament
for East Surrey**

COMPANY

House of Commons

How I use maths in my role

In my role as an MP, I work with policy makers and pollsters gathering statistical analyses so that I can create evidence based policies. In my additional role as Parliamentary Private Secretary to the Treasury, I use spreadsheets and work with analyses of public finances.

What I do

As a Member of Parliament and additional appointment as Parliamentary Private Secretary to the Treasury, I scrutinise and create public policy and legislation.

What three skills are most useful for your role?

Creativity, problem solving and building an argument!

What I love about my career and maths

I have loved maths from a young age. I love the feeling you get when you've solved a problem. Before I became a MP, I helped create National Numeracy Day UK. I wanted to encourage a culture where we find someone saying 'I can't do numbers' as concerning as someone saying 'I can't read'. I wanted to become an MP to be at the heart of the place (Government) which has the powers to create tools to make sure all adults are at ease when dealing with numbers.

My hobbies

Cooking, reading and cryptic crosswords!

How maths has helped me in everyday life

It's helped me with problem solving, budgeting and also understanding the news, so I can get a grasp of the severity of problems being reported.

My education

I have GCSEs in sciences and Mathematics, A-levels in Mathematics and Further Mathematics, as well as Bachelor's and Master's degrees in Maths and Philosophy.

My career advice

Everything in life is about putting in the hours. The more you do something the better you get at it. It's important to try and build excellence in something.



Clare Cowie

JOB

Senior Data Scientist

COMPANY

Ofcom

How I use maths in my role

I use maths to analyse plotted data on charts, to check my work is right, and to look at how my running speed is increasing as I practise.

What I do

I use Python to analyse and extract meaning from lots of kinds of data, not just tables of numbers! Data I analyse includes text, images and audio.

What three skills are most useful for your role?

Problem solving, communication and teamwork.

What I love about my career and maths

I was always interested in explaining how the world around me works, which is why I chose to study Physics at university. This has carried on in my job, where I look at lots of data that captures parts of the real world. I like to explain what the data is telling us in order to help other people make decisions.

My hobbies

I play lots of video games with my friends, and working together in the virtual world helps me get better at working in a team.

How maths has helped me in everyday life

Cooking - when a recipe is written with quantities for more portions than I need, I can use maths to convert those quantities into what I need. Maths is also important in music theory!

My education

I went to school in Scotland, so I have Highers and Advanced Highers in Physics and Maths, and a Master's degree in Theoretical Physics.

My career advice

Be curious and ask questions. Pick subjects that you enjoy.



Dafni

JOB

**Senior Audience
Researcher**

COMPANY

Science Museum Group

How I use maths in my role

I use maths when budgeting, forecasting, analysing and presenting research data.

What I do

I conduct research to identify museum audiences' wants, needs and expectations to make experiences more enjoyable and accessible.

What three skills are most useful for your role?

Teamwork, communication and creative problem solving.

What I love about my career and maths

I like that I get to learn more about the wants and needs of different museum audiences.

My hobbies

I like cycling and mending my bike which have helped my problem solving skills.

How maths has helped me in everyday life

Maths help me in every aspect of my life e.g. in cooking, traveling, gardening.

My education

Master's degree in Museum Studies.

My career advice

Don't give up, keep trying and you'll find the career for you!



David

JOB

**Purchasing and Stores
Co-ordinator**

COMPANY

Etex Exteriors

How I use maths in my role

I use mathematics when calculating costs of materials, obtaining the best price and for total cost of purchasing. This would be either by mental arithmetic, modelling or Excel.

What I do

I use Microsoft Excel for calculating the weights of materials and varied waste streams shipped from overseas as spare parts. The results of my calculations are then sent to a government department.

What three skills are most useful for your role?

Communication, problem solving and finding and using evidence.

What I love about my career and maths

I just love working with numbers and solving problems. Sometimes thinking out of the box!

My hobbies

I enjoy playing both team games and individual games. Team games are very useful for team building and communication. Individual games for competition and self-satisfaction when you achieve the goal.

How maths has helped me in everyday life

I am a treasurer for a local church and would not be able to do it without having maths as a key skill.

My education

I have a GCSE in Accounting and an Association of Accounting Technicians (AAT) Level 2 Qualification. I am also a member of the Institute of Operations Management.

My career advice

It may sound obvious but be willing to learn more and set your standards high. Take any opportunity to add skills to your toolbox.



Donna

JOB

Deputy Director of Research

COMPANY

Children's Commissioner's office

How I use maths in my role

I'm a statistician and we use statistical methods when designing our surveys and choosing what data to use. I also use statistical methods to analyse data.

What I do

I lead a team of researchers and statisticians. My team designs and carries out research to help make children's lives better and to make sure that their voices are heard.

What three skills are most useful for your role?

Finding and using evidence, analytical thinking and communication.

What I love about my career and maths

I've always enjoyed learning new things and particularly science. Through my A-levels and university I moved more into social science research and through that developed my love of all things statistics. I now enjoy carrying out very rewarding research for the Children's Commissioner as well as developing and mentoring my team.

My hobbies

I'm a big reader but I also enjoy exercise, particularly aerobics and pilates. I have a Jack Russell and I enjoy going on walks and hikes with him and my son.

How maths has helped me in everyday life

Managing personal and household finances and being pretty good at mental maths is useful when you go shopping.

My education

BSc Hons in Psychology and a MSc in Psychological Research Methods.

My career advice

Do be proactive and look into all career options around the subjects you really enjoy and ask for advice.



Ellie

JOB

**Principal - Retail
Investment**

COMPANY

Avison Young

How I use maths in my role

I use Excel, specialist property industry computer programmes, mental maths, and a calculator as part of my job as an investment surveyor.

What I do

I undertake cash flows, and use maths to calculate yields and work out the risk profiles and returns of various different retail warehouse assets, as part of my analysis to advise clients whether or not to buy and sell them.

What three skills are most useful for your role?

Interpersonal skills, resilience and perseverance.

What I love about my career and maths

The thrill of getting a deal done, the money and the strong relationships you build with clients and other agents. I like being one of a few women in the industry and mentoring the future generation of women in property. Using maths in my career was never my intention - I didn't feel I was particularly good at maths. However, I started my career in corporate finance which built my confidence using Excel and maths for what I do now.

My hobbies

I have a dog so walking with him is a forced hobby! I also spend a lot of time socialising - many of my friends I know through my career in property so it's always helpful spending time with them outside of work.

How maths has helped me in everyday life

I would say I am much more financially aware, this also helps me when it comes to investing in stocks and shares.

My education

I have GCSEs (got a B in Maths) and A-levels (English Literature, Music and Business Studies) and BSc in Land Management. I am also Royal Institution of Chartered Surveyors (RICS) accredited.

My career advice

If you like a varied career, which is very sociable, but with some maths thrown in, then it is a good career to have. You need to be determined, resilient and tenacious and those skills are arguably more important than being really good at maths.



Fern

JOB

Dance Producer

COMPANY

Freelance

How I use maths in my role

I use spreadsheets to manage budgets.

What I do

I manage budgets, plan dance events, fundraise money, attend dance shows/ events, answer lots of emails and work directly with dancers.

What three skills are most useful for your role?

Creativity, communication and organisation.

What I love about my career and maths

Being able to work with exciting dance artists and events and bring more dance to more people.

My hobbies

Swimming, travelling and sewing.

How maths has helped me in everyday life

Managing my own finances and sending invoices.

My education

BA (Hons) degree and a Master's degree.

My career advice

Always keep interested in your art form, go to shows, take classes and talk to people in the industry who inspire you.



Hafizah

JOB

Transport Economist

COMPANY

Department for Transport

How I use maths in my role

I mainly use maths in my role when conducting costings, e.g. for the Spending Review. I also use maths for Excel modelling; often the type of maths used for this is algebra. When drafting papers for senior officials, I often use statistics and percentages to get across the main points concisely.

What I do

I manage relationships with contractors and policymakers and ensure the quality of the analysis. I am also responsible for developing my team's data and evidence, which involves a lot of data modelling.

What three skills are most useful for your role?

Problem solving, communication and summarising.

What I love about my career and maths

I like enhancing Excel data models to make them more user-friendly. Automating models involves problem solving, which I really enjoy and seeing other people using my models is rewarding. I always enjoyed maths as school – and still do – it was the subject that made the most sense to me and I was good at it! I was interested in this particular job because it was a promotion and gave me the opportunity to work on a really high profile business case, something I had never done before.

My hobbies

I've always enjoyed journaling as a way to channel my thoughts. This has been great for my wellbeing and for reflecting on past experiences, both in and out of work.

How maths has helped me in everyday life

Maths plays a huge role in my day-to-day life, particularly for things like budgeting. I have a younger sister who is studying for her GCSEs this year and I've been tutoring her as I went through the process myself, did a degree that was relatively maths heavy, and currently apply maths in my job.

My education

I have a GCSE and A-level in Maths. I also studied A-level Economics and Biology, which incorporated mathematical elements. My degree is in Economics (BSc) and this was a pre-requisite for joining the Government Economic Service.

My career advice

Take the time to read the news and understand the wider political and economic landscape.



Helen

JOB

Projects Director

COMPANY

AYPM

How I use maths in my role

I use statistics for trends and research analysis, creating financial budgets and Excel spreadsheets. I also measure areas.

What I do

I am a Project Manager at AYPM, a management consultancy organisation specialising in Government.

What three skills are most useful for your role?

Communication, problem solving and being a jack of all trades.

What I love about my career and maths

Its variety and the people I meet.

My hobbies

Swimming - great way of meeting people.

How maths has helped me in everyday life

Understanding personal finance and property purchases and ownership of rental properties.

My education

MBA and Bachelor's degree in Management Science.

My career advice

Don't sweat it if you change your mind and move onto something you didn't train for. Any job is experience of some kind, especially about how to manage people.



India

JOB

Analytics and Insights Manager

COMPANY

GSK

How I use maths in my role

I use Excel formulas to match various data sets together. This allows me to quickly summarise the impact of decisions on number of products, value and inventory.

What I do

I use Excel and Power Bi data visualisation software for reports to extract and analyse data for the business. Mostly quantifying inventory data.

What three skills are most useful for your role?

Problem solving, communication and teamwork.

What I love about my career and maths

Always changing, lots of different projects, amazing colleagues.

My hobbies

Theatre - it helped with confidence and communication.

How maths has helped me in everyday life

Saving.

My education

A-levels in science subjects and Maths. I studied Biochemistry at university.

My career advice

Find your passion and follow it.



Alfie

JOB

Senior Project Development Engineer

COMPANY

Simply Blue Group

How I use maths in my role

I use maths for budgeting, light coding (to make my job easier/faster), and when reviewing reports, statistics and graphs to present to stakeholders. My most used tool is Excel. You only need a little experience to be able to do a lot. Planning is another important skill.

What I do

I am a project manager developing offshore wind farms in the Celtic Sea. I review design models and my background in engineering and maths helps me spot any inaccuracies faster. I also balance budgets, build programmes, and monitor other deliverables.

What three skills are most useful for your role?

Proactiveness, organisation and prioritisation.

What I love about my career and maths

There is a new challenge everyday. I've always had a fondness for numbers. I also love how statistics are now related to the real world, e.g. in sports. Numbers tell you a lot and are the foundation of every single thing in life, even riding a bike.

My hobbies

Sailing has benefitted my career as it helps me to understand and calculate risk. I encourage everybody to find an active hobby - simple exercises such as a walk do wonders to clear the head. If I'm struggling to solve something, I take time out to exercise or get a cup of tea and come back refreshed, ready to tackle the problem.

How maths has helped me in everyday life

Aside from sailing, maths helps me with planning expenditure e.g. working out the best deal when buying a car. Recently I was helping my mother build a tunnel greenhouse, and avoided wasted material and spending, by calculating the quantities needed. I also work out yields from my garden.

My education

I did A-level equivalents in Physics, Chemistry, Biology, Maths, followed by a four year Bachelor's degree in Mechanical and Manufacturing Engineering, and then a Master's degree in Sustainable Energy. I've also pursued some agricultural qualifications (ordinary and higher diplomas) on the side, and qualifications to teach sailing at various levels.

My career advice

Try lots of jobs, both office and manual related. Code. Play sport. Once you find your passion, try and figure out how to relate that to a job. If you like what you do, it makes getting up in the morning that much easier!



Isobel

JOB

Data Scientist

COMPANY

Financial Conduct Authority

How I use maths in my role

As a data scientist, I use a lot of statistical models, as well as machine learning models, which are built on concepts from statistics meaning that I need to understand the core concepts of e.g. probability theory to understand these and explain them to others.

What I do

I lead a team of data scientists working in Consumer Investments at the Financial Conduct Authority (FCA). The FCA regulates the financial services industry in the UK. We mainly use Python to extract insights from regulatory data, to inform our colleagues in understanding the behaviours of firms that we regulate. We work with both numerical and textual data, and support in identifying potential consumer harm.

What three skills are most useful for your role?

Problem solving, teamwork, and an interest in my work!

What I love about my career and maths

I enjoy working as part of a team who are all interested in how data science can be applied in the real world - we're not just focused on the details of our work, but also on how our work has a positive impact on consumers. I did a Physics degree, and as part of that I learned about how neurons work - which it turns out are quite similar to a lot of the methods we use in data science which I found fascinating.

My hobbies

I do a lot of running and cycling to look after my wellbeing and separate work from non-work. I also play musical instruments and am an avid reader, which helps me to relax. I enjoy travelling, and have recently been thinking about my carbon footprint and have been amazed at how much there is to experience in the UK. Finally I love baking - nowhere near good enough for bake off though.

How maths has helped me in everyday life

Scaling up/down baking recipes! And slightly less fun things like household budgeting (although I am a bit lazy with that so rely on my partner...).

My education

I took GCSEs and A-levels in science subjects and Maths and have a Physics degree. I'm currently working towards a PhD in computer science.

My career advice

Find a context that interests you - data science can, and will, be used in all areas which involve data, and that's pretty much everything. If you can, find a way to link your career to the things that naturally interest you.



Jane

JOB

**Associate Director -
Valuation Consultancy**

COMPANY

Avison Young

How I use maths in my role

I use maths in a variety of ways every day, from mental maths for quick sums to spreadsheets for larger calculations. We use software to model finance rates, for example, to calculate costs of borrowing. Good mental maths is useful to ensure there are no errors and to sense check the values.

What I do

I value a mix of development sites and residential and commercial buildings for a variety of purposes including accounts, loan security, asset management. I value properties using different methods and write up my findings within reports that are issued to clients.

What three skills are most useful for your role?

Finding and using evidence, being able to present your evidence in a logical written format and teamwork.

What I love about my career and maths

I've always enjoyed the problem solving of maths and loved A-level Core Maths at school. But, I also really enjoyed watching classic property programmes, particularly about development and home improvement. So I did a Master's degree conversion course in property and loved it. Maths slots in really nicely with it.

My hobbies

I play hockey, which has helped me to be a good team player and work well with other people, giving me confidence in my own abilities and developing my leadership skills. I love sewing my own clothes, which has opened up my creative side and helps me to think logically step-by-step. It also helps me wind down after work.

How maths has helped me in everyday life

Definitely with budgeting, calculating mortgages, as well as simple calculation of ordering the right amount of paint, flooring etc.

My education

10 GCSEs, 1 AS-level (Biology), 3 A-levels (Maths, Geography and French), BSc (Hons) Geography and Maths, MA Planning and Development, Royal Institution of Chartered Surveyors (RICS) Chartered Surveyor.

My career advice

There are loads of different strands to property, so it attracts all sorts of different people and there's generally something for everyone.



Joanne

JOB

Careers Adviser

COMPANY

Morrisby Ltd

How I use maths in my role

I use logic to call the right data from the database, generally using expressions and operations to do so. I regularly use Google Sheets/Excel to communicate data and content with a range of audiences, from developers to careers advisers.

What I do

I work at an EdTech company which provides a wonderful careers guidance tool for school aged students and adults. I am responsible for all the data on that tool. This includes careers and subject content and the data to match people to suitable careers. I use SQL, a programming language, to manage the data, to ensure it is all correct and current.

What three skills are most useful for your role?

Communication, problem solving and drive.

What I love about my career and maths

I initially wanted to become a careers adviser to help young people decide on their career path. I didn't feel as though I got much guidance on this area myself so wanted to help others make informed decisions. Having gained a maths degree prior to training as a Careers Adviser, I always felt as though my Maths skills went unused. When the data role at the careers EdTech company I work for now came up it seemed like the ideal marriage of my skills.

My hobbies

I have always been very sporty and captained many teams at school, helping to boost my confidence and communication skills. I enjoy running and DIY which get me away from the computer screen at the end of a day at work!

How maths has helped me in everyday life

Most significantly when I was saving to buy my first home, and subsequently when I have renovated it. Maths has helped keep me on track financially!

My education

A-level in Maths, and went on to do a Maths with Education Studies degree at university. I have self taught myself SQL and gained a postgraduate qualification in Careers Guidance.

My career advice

If you aim to do something you love you will put your heart and soul into it and will succeed. Don't be afraid to try different career ideas, do work experience, ask to shadow a contact at work, and speak to as many people as you can about their job role.



Jodie

JOB

Communications Manager

COMPANY

Coalition for Epidemic Preparedness Innovations (CEPI)

How I use maths in my role

I use online quantitative analytical tools to work out the media coverage CEPI achieved on a daily/ weekly/ monthly basis (eg, how many times was the name 'CEPI' mentioned online or in print) and where in the world these stories were published. I use analytical tools to assess the engagement with our social media posts on platforms like Twitter and LinkedIn.

What I do

I manage CEPI's social media channels, write press releases to announce new CEPI vaccine partnerships and vaccine stories, and manage media enquiries. I also work with a web agency to advance the function of our website.

What three skills are most useful for your role?

Creativity, team work, and being able to communicate complex science stories so that everybody can understand them.

What I love about my career and maths

CEPI is also one of the key organisations leading the response to the COVID-19 pandemic - everything is very fast-moving and no two days are the same. Everybody has a key role to play in the response.

My hobbies

I enjoy Hula Fit (a fitness class with a hula hoop) as well as running and painting. All of these activities help me de-stress and are great ways to relax and mix with others.

How maths has helped me in everyday life

Budgeting for food, bills, rent.

My education

I have GCSEs and A-levels in sciences and Mathematics. I also studied Psychology at University (as a BSc).

My career advice

Write as much as you can, read as many news stories as possible, practice drafting short, interesting tweets, and other social media posts and then see how you can measure the success of these posts (e.g. likes, comments, retweets etc.).



John

JOB

Project Director

COMPANY

Avison Young

How I use maths in my role

My role needs standard mathematical skills however these are limited to relatively routine arithmetic knowledge rather than anything too advanced. As I am not involved in research or advanced science, it is a matter of being quite numerate.

What I do

I am a project manager on large construction projects in the UK, generally London based. I use the standard Microsoft software for a number of applications for programming, data collection, budgeting purposes etc.

What three skills are most useful for your role?

Problem solving, management and reporting.

What I love about my career and maths

Delivering solutions to problems.

My hobbies

Running and golf at basic level, but these have not necessarily contributed to my career.

How maths has helped me in everyday life

Being numerate is essential for all the necessities of life outside work.

My education

GCSEs, A-levels, BSc in Civil Engineering, Chartered Engineer.

My career advice

Engineering is a well worthwhile career that provides many paths to follow as the career develops. Not limiting in any way at any future stage, i.e., engineering can make way to becoming a lawyer, accountant, computer specialist or even a service in the police or armed forces.



Kate

JOB

Baker

COMPANY

Kate's Bakery Hay

How I use maths in my role

I use mental arithmetic and basic written calculations throughout the day to follow and adjust recipes and formulate baking schedules.

What I do

Other uses for maths in my role as a self employed business owner include costings, book keeping and profit and loss forecasting. On market days I use mental arithmetic when serving customers.

What three skills are most useful for your role?

Accuracy, stamina and entrepreneurial skills.

What I love about my career and maths

I'm passionate about baking real bread and providing a crucial service in my small community. Maths is integral in any work with food production. It is also crucial in the successful running of a small business.

My hobbies

I love to sample new food experiences. I maintain my strength and well being with yoga and walking and wild swimming. An active cultural life stimulates ideas and opportunities.

How maths has helped me in everyday life

I have four children and so money management is a very important part of running a household and imparting solid financial skills for life.

My education

English BA Hons.

My career advice

Follow your passion but ground it in reality and solid skills and hard work. Don't be afraid to change and never stop learning. Stay curious and stay canny!



Katy

JOB

Head of Special Events

COMPANY

Natural History Museum

How I use maths in my role

I use Excel for budgeting, financial management and forecast planning. I do data analysis of guest attendance rates and value added to show return of investment. I also compare quotes and production briefs. In my previous role I was also responsible for income generation.

What I do

I plan and manage events for a museum which are designed to deepen and further relationships for financial return.

What three skills are most useful for your role?

Problem solving, team working and planning.

What I love about my career and maths

I like delivering activity that has a point and delivers impact. My current role allows me to support the work of the Museum through a creative and practical application.

My hobbies

I'm a cyclist and enjoy film photography.

How maths has helped me in everyday life

Personal budgeting always and with interests such as cycling, sewing, home DIY and cooking where I need maths for measurements, planning and amending.

My education

I have GCSEs and A-levels in Maths and science subjects. I have a Bachelor's degree in History and a Master's degree in Event Management.

My career advice

Event management is a varied career path - do some volunteering and find out what you enjoy.



Kim

JOB

Project Manager

COMPANY

Civil Service/Smart Works

How I use maths in my role

The monthly activity reports I write share statistics on the impact the charity has. I use Excel to write percentages and to show whether we are on or off target. When planning conferences, I use Excel to work out the costs and to ensure that we stay within the budget.

What I do

I do a lot of different things including project managing staff conferences and writing the internal activity report for the charity, which displays the quantity of women we support each month. I'm also currently setting up a care leavers programme for SmartWorks and I provide general day-to-day business support for the charity.

What three skills are most useful for your role?

Working with people, communicating and problem solving.

What I love about my career and maths

I get to work on various projects and learn new skills. I love working with new people which is something that I get to do often.

My hobbies

Working with young people has helped me to learn about interpersonal skills.

How maths has helped me in everyday life

It helps me to manage my finances and to live on a budget!

My education

I have 10 GCSEs, 3 A-levels and Bachelor's of Science with Hons in International Business (which is a maths/statistics based degree).

My career advice

Go for it! Get as much experience as possible and get involved in a substantial amount of extra-curricular activities.



Laura C

JOB

Corporate Accountant

COMPANY

Avison Young

How I use maths in my role

I use maths everyday in my role, to calculate payments that need to be made, including mental maths, statistics and Excel spreadsheets and budgets.

What I do

I use Excel to manipulate large amounts of data, in order to make sense of the numbers, and analyse any variances against budgets.

What three skills are most useful for your role?

Communication, summarising and finding and using evidence.

What I love about my career and maths

I loved maths as a child and went on to study Maths and Further Maths at A-levels, and I wanted to utilise maths in my career. I decided to study Accounting and Finance at university, and then carried on to become a qualified Accountant. I really enjoy my job, and I get to use maths everyday in my role.

My hobbies

I go hiking, love climbing new mountains which has helped me to problem solve, when taking a different route down a mountain, you need to look at what obstacles are in your path, and how you are going to plan and get round them. I have a new puppy, which has helped my patience.

How maths has helped me in everyday life

Skills I have learned such such as budgeting, really helped me to budget to buy my first home, stick to a limit for food shopping every week, and helped me learn to make savings every year to buy myself something nice like a holiday or a new car.

My education

I have GCSEs, A-levels in Maths, as well as a First-Class Honours Bachelor degree in Accounting and Finance. I then went on to become Association of Chartered Certified Accountants (ACCA) qualified as a Chartered Accountant, and continue my learning each year.

My career advice

Becoming an Accountant is an exciting career, it is hard work but very rewarding, and gives a great sense of achievement.



Laura H

JOB

**Private Secretary to the
Children's Commissioner**

COMPANY

Children's Commissioner's office

How I use maths in my role

I use maths when interpreting and explaining analysis to the Children's Commissioner.

What I do

I ensure the Children's Commissioner's time is used efficiently and that she is fully briefed so she can make effective decisions.

What three skills are most useful for your role?

Communication, organisation and teamwork.

What I love about my career and maths

Working in a fast-paced environment and still having the opportunity to use my analytical economist background.

My hobbies

Reading has helped with taking in lots of information. Exercise (gym and walking) has helped with perseverance.

How maths has helped me in everyday life

Household budgeting and expenses.

My education

I have a BSc in Economics, A-levels in Maths, Economics and English Literature.

My career advice

Don't plan out the next 20 years of your life, you never know where your career will take you.



Lizzie

JOB

Quantitative Analyst

COMPANY

Office of the Children's
Commissioner

How I use maths in my role

I use statistics every day in my job as a data analyst, including mental maths, statistics, Excel spreadsheets, budgeting and modelling.

What I do

I use Excel and R (data visualisation software) to analyse administrative and survey datasets using quantitative and qualitative analytical techniques and share the findings in reports and presentations.

What three skills are most useful for your role?

As a statistician, problem solving, communication (both written and speaking), and critical thinking, we always need to criticise our own work, find any issues and solve them to make sure the stats we produce are valid.

What I love about my career and maths

I enjoy creating data visualisations that help other people easily understand the data.

My hobbies

My hobbies include cycling, cooking and walking. They've helped me cope with stress during my career so far.

How maths has helped me in everyday life

Maths has helped me with budgeting and financial things!

My education

I have GCSEs and A-levels in sciences and Mathematics, as well as Bachelor's and Master's degrees in Ecology and Conservation Science. For my PhD I became interested in statistical modelling and coding, particularly in the R coding language.

My career advice

Coding can be a really great skill that is increasingly useful. It isn't just for computer whiz kids, and can be really fun.



Louise

JOB

Director

COMPANY

Avison Young

How I use maths in my role

I measure buildings and calculate floor areas using geometry. I calculate site density stated as a percentage. I make comparisons with rents achieved on other properties by calculating rent on a per square foot basis and make adjustments for incentives to get to a net rent basis. I run a budget for the cost center using Excel spreadsheets.

What I do

I negotiate commercial rent reviews and lease renewals, agreeing lease terms and rents on behalf of one of the parties.

What three skills are most useful for your role?

Communication, problem solving and negotiation.

What I love about my career and maths

Opportunity to get out of the office, to meet people and inspect buildings. Interaction with a wide range of businesses and people. Problem solving on practical issues that make a difference to the people involved. The interpretation of leases and the need to have an understanding of the law.

My hobbies

Walking, hiking, cycling and travelling.

How maths has helped me in everyday life

Maths helps with everything from splitting a bill in a restaurant, to budgeting, to buying enough paint to decorate a room, to calculating how long a hike will take over mixed terrain so you can be off the mountain before nightfall.

My education

GCSEs and A-levels, direct qualification to member of Royal Institution of Chartered Surveyors (RICS), Diploma in Arbitration (DipArb), Member of Chartered Institute of Arbitrators (MCI Arb).

My career advice

When you set yourself a target aim high and be prepared to review the target if it is no longer what you want. Be persistent, a failed exam is not the end, they can be retaken. Keep going, there is always more to learn.



Lucy

JOB

Buyer

COMPANY

Emma Bridgewater

How I use maths in my role

I use maths in my role to make informed decisions about which designs we are going to develop and launch in the upcoming season based on sales analysis and projections.

What I do

I use Excel to analyse sales, looking at what performs best and worst in order to make decisions about which new product designs we will develop and launch next season. I use Excel to plan quantities and prices for the new range, to make a profitable margin and plan discounts during sales and promotions. I work with our factories to ensure we plan and develop new products in a cost effective way.

What three skills are most useful for your role?

Communication, attention to detail and problem solving.

What I love about my career and maths

I chose a career in buying as I get to use my creative skills and my analytical skills to develop lovely products.

My hobbies

I like to travel and really enjoy working with suppliers around the world who are experts in their field.

How maths has helped me in everyday life

I use the techniques that I have gained to forward plan upcoming seasons in my buying role to help with budgeting in my personal life.

My education

I have GCSEs, A-levels and a Level 4 Diploma in Fashion Buying and Merchandising which gave me the grounding I needed to pursue a career in buying. I have a degree, but some entry level buying roles do not require a degree.

My career advice

Get yourself some work experience on the shop floor to get an understanding of how the retail sector works. In entry level buying interviews speak about your experience and the aspects of the job that you would enjoy.



Lucy

JOB

Visitor Events Manager

COMPANY

Natural History Museum

How I use maths in my role

I oversee budgets, ensuring ticket income exceeds expenditure to make a profit. I use Excel to keep budgets and data visualisation software to report data. I ensure staff and suppliers are paid correctly and reforecast several times a year to check income and expenditure.

What I do

I manage a team who plan ticketed events for the public to attend. These events engage audiences with the Natural History Museum in a different way to a normal daytime visit, and they also generate unrestricted income which goes back into the Museum to help cover scientific research, create exhibitions, fix toilets, keep the Museum running, and more.

What three skills are most useful for your role?

Creativity, communication and teamwork.

What I love about my career and maths

To work in the beautiful building of the Natural History Museum, surrounded by the most amazing specimens, is a dream job. To see the excitement that attendees have when they attend a sleepover, come to a silent disco and our other events is the most rewarding feeling that makes the hard work and long hours worth it.

My hobbies

Enjoying the outside world - whether that's going for walks, bird watching in the forest or gardening - helps me to engage with the natural world. Going to other visitor attractions helps me to see what other places do to engage people with their building and activities.

How maths has helped me in everyday life

Two years ago, I bought my house with my boyfriend and needed to use maths to work out the amount of money we could borrow and to get a mortgage, which was dependent on our salaries. I use maths to work out measurements of furniture to fit in my house. I also use maths when working out commutes to work, looking at journey times, and comparing costs for different routes. I also use maths to work out measurements of furniture to fit in my house.

My education

I have GCSEs, A-levels in Biology, Maths and Textiles. I have a BSc in Zoology.

My career advice

DO IT! I promise you won't regret it. Admittedly, working in the events industry is a lot of hard work and long hours. But, it's a great achievement to see people engage with activities you created and developed, and to watch the enjoyment they have in attending something that you have put together.