

CAREERS THROUGH MATHS: CLEANER



Cleaners use mathematics to solve complex problems and drive innovation. (Image Source: Unsplash)

JOB OVERVIEW

A Cleaner in the UK is far more than someone who empties bins and vacuums floors; they are the operational backbone of hygiene, safety, and efficiency across every sector of the British economy. Whether working for multinational facilities management firms like **ISS UK** or **Mitie**, within the NHS through **Serco**, or as a self-employed contractor, daily responsibilities involve a meticulous cycle of tasks. A typical shift might begin at 6:00 AM at a London office tower, where the cleaner must methodically sanitise high-touch points, replenish consumables, and manage waste streams, all while calculating the correct dilution ratios for chemical concentrates—often 1:40 or 1:80—to ensure both cost-effectiveness and compliance with COSHH (Control of Substances Hazardous to Health) regulations.

KEY MATHS APPLICATIONS

Primary Areas:

- **Ratio and Proportion (Chemical Dilution):** ** This is the most critical daily calculation. UK cleaning chemicals, such as those from **Ecolab** or **Diversey**, come as concentrated solutions that must...
- **Area and Volume Estimation (Resource Allocation):** ** Before any deep clean or floor maintenance project, a cleaner must estimate the surface area to be treated to order the correct amount of materials.
- **Time, Speed, and Scheduling (Workload Optimisation):** ** Cleaners work to strict service level agreements (SLAs) that specify how many times a toilet must be checked per hour or how long a ward clean should take.

ESSENTIAL SKILLS & TOOLS

SKILL	APPLICATION
Dilution Control Systems (e.g., Dosatron)	These chemical dosing pumps are calibrated using ratios. A cleaner using a Dosatron unit...
Microsoft Excel / Google Sheets	Used extensively for stock control and labour scheduling. A site supervisor at a facility...
BICSc Assessor Software	The British Institute of Cleaning Science uses a digital platform for logging operative...
Mobile Work Order Apps (e.g., FSI GO, ServiceNow)	These apps require cleaners to log task completion times and flag issues.

TYPICAL PATHWAY

Entry into cleaning in the UK typically requires no formal academic qualifications, but a good standard of numeracy (equivalent to a Grade 4 or above in GCSE Maths) is increasingly desired by employers like OCS Group or Bidvest Noonan for supervisory roles.

QUICK FACTS

- **Salary:** £12
- **Growth:** ** The UK cleaning sector employs over 1.5 million people and is growing at approximately 3% annually, outpacing the national average, according to the **British Cleaning Council**.

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REAL-WORLD IMPACT

Cleaners are the invisible guardians of public health in the UK, directly contributing to the reduction of healthcare-associated infections (HCAIs) which cost the NHS an estimated £1 billion annually.