

Computer and mathematical workers

This occupational group includes computer and information analysts, software developers and programmers, database and systems administrators, computer support specialists, actuaries, mathematicians, statisticians, operations research analysts, and mathematical technicians.

Cognitive and mental requirements

The qualifications that workers need to use judgment, make decisions, interact with others, and adapt to changes in jobs.

In 2023, more than basic people skills were required for 96.1 percent of computer and mathematical workers, and basic people skills were required for 3.9 percent.

Table 1. Percentage of computer and mathematical workers with cognitive and mental requirements, 2023

Requirement	Yes	No
Pace: Pause control	96.0	4.0
Interaction with general public	52.7	47.3
Working around crowds	<0.5	>99.5
Telework	53.5	46.5
Work review: Supervising others	12.5	87.5
Work review: Presence of supervisor	52.5	47.5

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

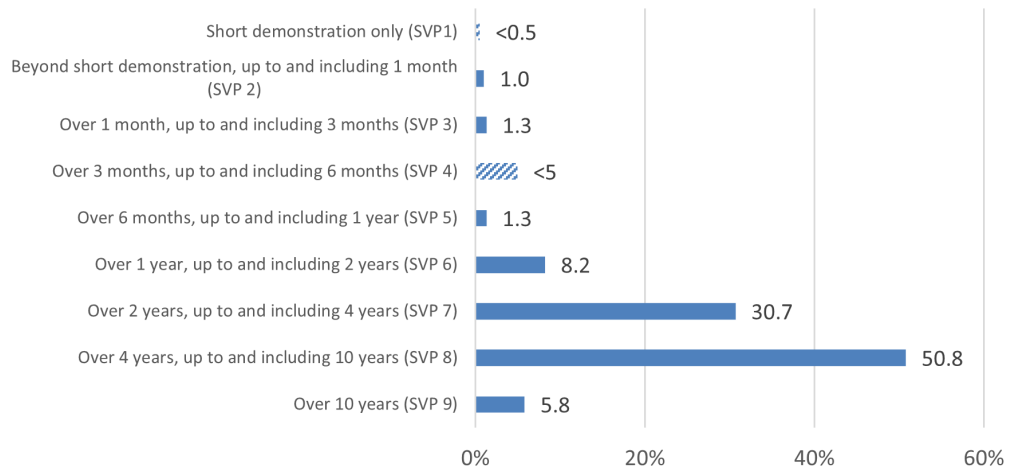
Education, training, and experience requirements

The minimum level of formal education required, credentials necessary, on-the-job training, and prior work experience necessary for average performance in jobs.

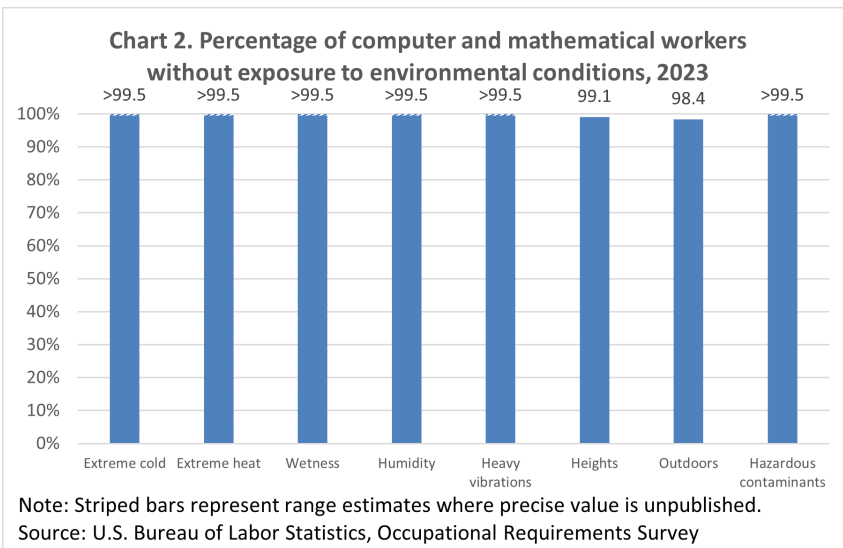
In 2023, credentials were required for 15.2 percent of computer and mathematical workers. Prior work experience was required for 82.9 percent and on-the-job training was required for 62.1 percent.

A bachelor's degree was required for 65.5 percent of computer and mathematical workers.

Chart 1. Percentage of computer and mathematical workers by specific preparation time (SVP) level, 2023



Note: Striped bars represent range estimates where precise value is unpublished.
Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey



Environmental conditions

The various tangible or concrete hazards or difficulties that are in the vicinity of where jobs' critical tasks are performed.

In 2023, greater than 99.5 percent of computer and mathematical workers were not exposed to extreme cold, and greater than 99.5 percent were not exposed to extreme heat. Wetness was not present for greater than 99.5 percent, greater than 99.5 percent were not exposed to heavy vibrations, and 98.4 percent were not exposed to the outdoors.

Physical demands

Refer to the physical activities required to perform tasks in jobs. The presence and, in some cases, duration of these activities are published.

In 2023, keyboarding was required for greater than 99.5 percent of computer and mathematical workers and was not required for less than 0.5 percent. For less than 0.5 percent of workers, keyboarding was seldom performed, for 8.1 percent keyboarding occurred occasionally, 71.7 percent frequently, and for 20.1 percent keyboarding occurred constantly.

Performing work in low postures was required for 19.9 percent of computer and mathematical workers and was not required for 80.1 percent.

The choice to sit or stand when performing critical tasks was available to 93.0 percent of computer and mathematical workers. On average, workers spent 88.9 percent of the workday sitting and 11.1 percent of the workday standing.

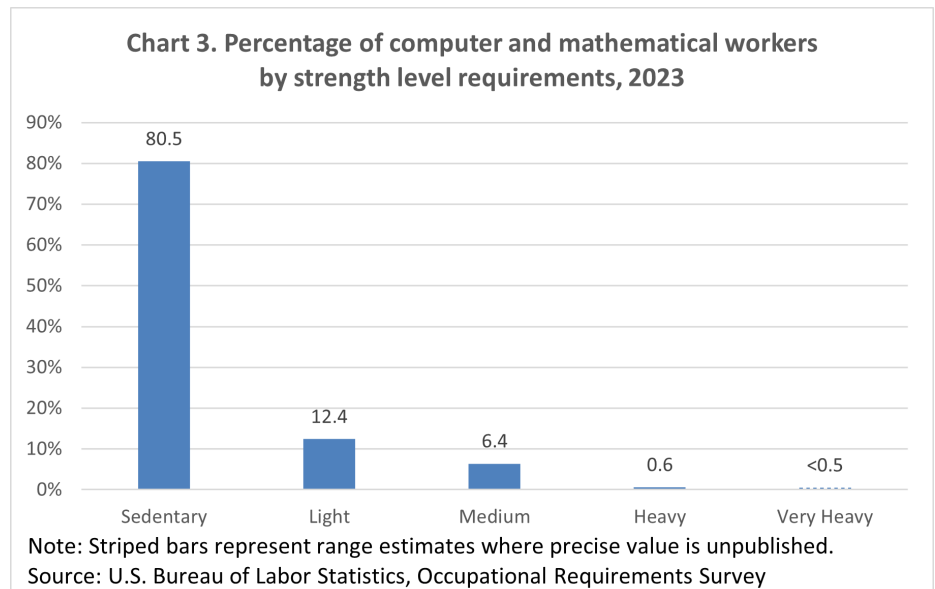


Table 2. Percentage of computer and mathematical workers with physical demands, 2023

Requirement	Yes	No
Choice of sitting or standing	93.0	7.0
Driving	8.5	91.5
Climbing structure-related ramps or stairs	5.3	94.7

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey