

# MAP4C Final Evaluation

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June 2017

## 0.1 Finding Math in Your Career

1. *State the career that you intend on pursuing.*

→ Sign Language Interpreter

2. *Give a brief description of what you would do one a day-to-day basis.*

→ Sign language interpreters use sign language to convey spoken messages to Deaf people, and translate sign language for non-signers. Most Deaf people in North America use American Sign Language (ASL), a system of hand movements and hand shapes combined with facial grammar and expressions, to communicate.

Like all linguistic groups, Deaf ASL users have a distinct culture, but they also live, work, and go to school with people who can hear. They see doctors, hire lawyers, and participate in politics. Sign language interpreters work wherever the Deaf and the hearing need to communicate—from nursery school classrooms to the national parliament. They use their knowledge of ASL and English to accurately relay information between Deaf and hearing persons by “interpreting” messages conveyed in one language into the other.

ASL doesn’t match English word for word. It’s an independent language, actually closer in structure to French than to English. Sign language interpreters must be fluent in ASL, as well as highly skilled in written and spoken English. They have to be very sensitive to the nuances of both sign language and English, because interpretation isn’t just about finding equivalent words. It involves conveying intentions, attitudes, metaphors, and humour. This also requires an understanding of Deaf culture.

Interpreters often work in sensitive situations, such as legal or labour disputes, and they have to communicate without getting involved in or heightening conflict. No matter what the situation, they must remain strictly professional, interpreting as accurately as possible and without judgement or comment. They’re also bound by a strict code of confidentiality.

It is very common for interpreters to work freelance, taking short contracts for sessions that may be a few hours or a day in length. They get their assignments through regular clients and referrals, and sometimes through interpreter

service agencies. Like other self-employed people, freelance interpreters take care of things like scheduling, billing, accounting, and remitting taxes.

Freelance interpreters, particularly those working in large urban centres, have to travel from location to location for their assignments, and may spend quite a lot of time driving.

Because signing involves so many fine hand movements, interpreters risk getting repetitive movement injuries. For assignments exceeding 2 hours, at least two interpreters are usually called in, and they interpret in shifts of around 20 minutes each. (They also work in teams for particularly difficult assignments of any length.) Most interpreters restrict their time signing to between 20 and 30 hours a week, in order to prevent injury. However, for those working in legal, medical, and other technical areas, the research and preparation required often makes for a workweek of 40 hours or more.

Most interpreters work in a range of settings (which is what many love about the job), but they have the option of specializing in one area, such as law or education.

*3. How will you use mathematics and the concepts you have learned in this course in your future career? The units studied in this course are listed below. Place a checkmark beside each unit that applies to your career and briefly describe below.*

- ☐ 1-Variable Statistics
- ☐ 2-Variable Statistics
- ☐ Exponentials
- ☐ Personal Finance
- ☐ Geometry
- ☐ Trigonometry

I could require the use of any of the math we learned in this course. A sign language interpreter, depending on where they work or are needed, usually do different things each day. If I were needed to translate a class or lesson, I could need to use or know whatever math is needed. Depending on how you look at it, I could use geometry every time I sign or read someone else's sign language, because it is composed of shapes. I would use personal finance in my own life. Sign language interpreters make between 20-55 dollars an hour, measured so because there's usually no annual salary, jobs aren't always regular. I won't always know exactly how much I'm getting paid the month, or week, so I would need to really plan out my expenses.

*4. Contact someone who is currently working in your chosen career and ask them questions about their daily routines and, in particular, to explain how they use mathematics in their career.*

→ I contacted John Todd, who interprets lectures on higher mathematics, and translates them to sign language for deaf or hard of hearing students. Here is

how my interview with him went:

Megan: First off, what is, or are, 'higher mathematics'?

John: Higher mathematics is different from applied mathematics, the branch of mathematics used to gain insight into problems arising in science and engineering.

Megan: How easy is it to interpret, and translate, higher mathematics?

John: Not very. From a linguistic point of view, applied mathematics is easier to express in ASL because it is grounded in the physical and computational sciences. Key ideas in applied mathematics are often expressed via analogies with physical phenomena. This is rarely the case for higher mathematics, which often involves ideas not grounded in the physical, computational, or social sciences. Solving the problems associated with expressing higher mathematics in ASL would resolve most difficulties associated with expressing applied mathematics in ASL, but the converse does not hold true.

Megan: What are some challenges that come along with your job?

John: Mathematical language can be difficult to interpret because its vocabulary and grammar are so far removed from conversational speech. Unfamiliar vocabulary and grammar do not alone account for the often opaque nature of mathematical discourse. Even the subject matter can be problematic in the sense that it may not be clear what a particular branch of mathematics is "about." Why would anyone study it? What is its relationship to the physical world? What does it mean?

End of interview

## 0.2 Posing and Solving a Problem Related to Your Career